DOCUMENT RESUME

ED 286 892 TM 870 490

AUTHOR Camayd-Freixas, Yohel; Donahue, Maryellen F.
TITLE Quantitative Analysis of Curriculum Effectiveness: 1986.
INSTITUTION Indiana Univ., Bloomington. Russian and East European Inst.
PUB DATE Jan 87
NOTE 331p.; Some tables contain small print.
PUB TYPE Reports - Evaluative/Feasibility (142) -- Statistical Data (110)

EDRS PRICE MF01/PC14 Plus Postage.
DESCRIPTORS *Achievement Tests; *Criterion Referenced Tests; *Curriculum Evaluation; *Educational Assessment; Educational Objectives; Educational Testing; Elementary Secondary Education; Evaluation Methods; Instructional Effectiveness; School Districts; *Scores; Tables (Data); Testing Programs
IDENTIFIERS *Boston Public Schools MA; Curriculum Based Assessment; *Curriculum Related Testing

ABSTRACT

This report is designed to provide numerical data about student performance on the curriculum of the Boston (Massachusetts) Public Schools (BPS) as measured by curriculum referenced tests (CRTs). BPS Department of Educational Testing analyzed data from the 1986 CRT final exams in: reading and language arts (grades K-8), high school English (six levels), mathematics (grades 1-8), high school mathematics (nine levels), science (grades K-8), high school science (six levels), social studies (grades 3-8), U.S. History and Civics, Spanish I and II, and French I. BPS curriculum guides direct instruction in most subjects. Since each curriculum guide is matched with a curriculum referenced test, assessment of the extent to which students meet specific objectives set forth in the guides is possible. This analysis is used to identify strengths and deficits in curriculum implementation or instruction as measured by student CRT performance. Results may be used for specific intervention at the school level or for discerning school district patterns. The report contains descriptions of each instrument, the specific curriculum objectives addressed by the CRT, the student population, system strengths and weaknesses, and extensive tables presenting school-by-school analyses of percent of correct responses to each test item. (MDE)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED286892

Boston Public Schools

QUANTITATIVE ANALYSIS OF CURRICULUM EFFECTIVENESS: 1986

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☑ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

- Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

Y. Camayd-Freixas

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

Office of Research & Development

Department of Educational Testing

TM870490

BPS
Research & Development

BEST COPY AVAILABLE

QUANTITATIVE ANALYSIS OF CURRICULUM EFFECTIVENESS: 1986

BOSTON PUBLIC SCHOOLS

Yohel Camayd-Freixas, PhD
Director
Office of Research
and Development

Maryellen F. Donahue
Manager
Department of
Educational Testing

January 1987

THE SCHOOL COMMITTEE OF THE CITY OF BOSTON

PRESIDENT
John A. Nucci

VICE-PRESIDENT
Shirley Owens-Hicks

TREASURER
Daniel R. Burke

MEMBERS
Abigail Browne
Joseph W. Casper
William Donlan
John P. Grady
Kevin A. McCluskey
Jean McGuire
John D. O'Bryant
Thomas M. O'Reilly
Juanita Wade
Rita Walsh-Tomasini

SUPERINTENDENT of SCHOOLS
Laval S. Wilson, PhD

DEPUTY SUPERINTENDENT for CURRICULUM and INSTRUCTION
Rudolph Crew, EdD

DEPUTY SUPERINTENDENT for OPERATIONS and ADMINISTRATION
Joseph M. McDonough

DEPUTY SUPERINTENDENT for PLANNING and RESOURCE ALLOCATION
James F. Walsh, PhD

4

FOREWORD

This "Quantitative Analysis of Curriculum Effectiveness" is a new publication by the Office of Research and Development (R&D). It is designed to provide extensive numerical data on the performance of Boston Public Schools (BPS) students on our curriculum, and has been developed as part of R&D's educational accountability and planning program.

The data and analyses in this publication focus exclusively on the curriculum referenced tests (CRT's) program conducted by R&D's Department of Educational Testing. This monograph details student performance on the 1986 CRT final exams, grouped by grade level and subject area, in:

- Reading/Language Arts (Levels K-8)
- High School English (6 levels)
- Mathematics (Levels 1-8)
- High School Mathematics (9 levels)
- Science (Levels K-8)
- High School Science (6 levels)
- Social Studies (Levels 3-8)
- High School Social Studies (U.S. History and Civics)
- High School Foreign Languages (Spanish I & II, French I)

The special contribution of this analysis of CRT data is that it speaks directly to the effectiveness of BPS curricula. Classroom instruction for most subjects taught at BPS (e.g., Math, Science) is directed by curriculum guides at each grade level, which delineate specific, measurable objectives to be achieved for each strand or domain in the subject area (e.g., computation in arithmetic). Each curriculum guide, in turn, is accompanied by a matching curriculum referenced test (CRT) developed by R&D's Department of Educational Testing in collaboration with staff from the Division of Curriculum & Instruction. In essence, each curriculum objective is measured by a specific test item, and each group of objectives or curriculum strand is measured by a cluster of test items called a domain. This structure allows assessment of the effectiveness of the BPS curriculum by measuring the extent to which students have learned or "meet" the specific groups of objectives set out in the curriculum guides.

The Division of Curriculum and Instruction, and personnel at district and school levels, can apply this analysis to identify strengths and deficits in curriculum implementation or instruction --as suggested by student CRT performance-- and design finely targeted, information-driven instructional interventions at the school level. This method can also serve to identify patterns of specific strengths and deficits across schools within districts, or patterns of compounding deficits across systemwide curriculum levels. This can assist the Division of Curriculum & Instruction and community district superintendents to plan targeted remedial programs aimed at intervening strategically in the BPS curriculum.

The quantitative data provided in this publication should offer the opportunity for valuable and insightful analyses of our educational curriculum, and serve as a springboard to an intensive dialogue and concerted planning efforts by our professional personnel. It is our hope that this monograph will play a positive and constructive role in promoting organizational learning and creative school-based planning.

Yohel Camayd-Freixas, Ph.D.
Director
Office of Research & Development

Maryellen Donahue
Manager
Department of Educational Testing

January 1987

QUANTITATIVE ANALYSIS OF CURRICULUM EFFECTIVENESS

BOSTON PUBLIC SCHOOLS

1986

CONTENTS

Page

Title Page i

The School Committee of the City of Boston ii

Foreword iii

Contents v

Acknowledgements vi

How to Read This Report vii

School Codes xi

SUBJECT AREAS

Reading/Language Arts (Grades K-8) 1

High School English 49

Mathematics (Grades 1-8) 75

High School Mathematics 115

Science (Grades K-8) 153

High School Science 193

Social Studies and Civics 219

High School Foreign Languages 255

ACKNOWLEDGEMENTS

This publication, Quantitative Analysis of Curriculum Effectiveness: 1986, is a new report. It contains a tremendous amount of information on student performance on each of the final Curriculum Referenced Tests administered in the spring of 1986. For the first time, the system is provided with information on each of the items at the system, district, and school levels. This discrete information will provide the base on which to build improved and more focused instructional initiatives.

Given the magnitude of the endeavor, a number of departments were involved in the publication. From the Office of Information Systems: Albert Lau provided the leadership in the data processing effort, and Arlene Thompson and Christopher Murray handled most of the programming and data processing. From the Office of Curriculum and Instruction: the program directors gave guidance in examining the curriculum objectives. From the Department of Educational Testing a very special thanks is due to Edwina Anderson who contributed the layout and design for this publication and coordinated the printing process.

This document is the result of collaborative efforts of a number of departments and to them the Office of Research and Development dedicates this publication.

Yohel Camayd-Freixas, Ph.D.
Office of Research and Development

Maryellen Donahue
Department of Educational Testing

January 1987

HOW TO READ THIS REPORT

This document is organized by subject area and, within each subject area, analyses of curriculum referenced test (CRT) data is conducted by grade level. The sections for each grade level are described below:

CRT Summary

For each CRT test there is a narrative summary page that describes the CRT instrument and the specific curriculum strands addressed by the CRT, the population to whom the test was administered, and outlines analyses of performance strengths and weaknesses in the curriculum made evident by these data. In this latter section, an overview of student achievement is provided from a system-wide perspective. District and school personnel are encouraged to apply similar analyses to their individual district or school.

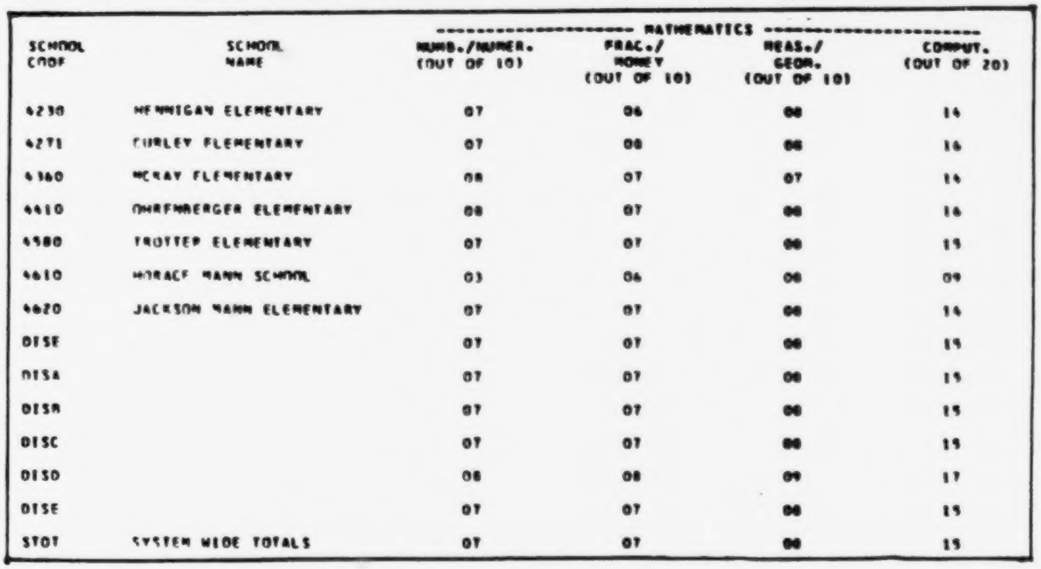
CRT and Curriculum Objectives Correlation Sheet

This sheet lists the objectives tapped by each item within each domain for tests at grade levels 3 and above. The Kindergarten, Grade 1, and Grade 2 levels do not have this item-by-item breakdown because teachers report item scores aggregated by each domain or curriculum strand, and single item/objective data is thus not available. The young age of students taking this test necessitates their writing directly in the test booklets, rather than on separate answer sheets. Teachers must then hand-score the booklets and record the students' scores for each subtest on data collection sheets.

Data Pages (Levels K-2)

For levels K-2 the school code and name are listed on the left-hand side of the upright page, and all the curriculum strand/domain titles are listed on the top of each column. To facilitate explanation of how this table may be analyzed, a portion of the Mathematics-Level 1 test is reproduced in page viii and analyzed below.

In this example it can be seen that at the Ohrenberger School, the average number of items that Grade 1 students answered correctly in the Numbers/Numeration domain was 8 out of a possible 10 items; in Fractions/Money the average was 7 out of 10 items; in Measurement/Geometry the average was 8 out of 10 items; and in Computation the average was 16 out of 20 items. When comparing the average scores of the Ohrenberger school to those of District E (the second line from the bottom), we can see that Grade 1 students at that school performed, on average, as well as other students in the District in both the Fractions/Money domain and in Measurement/Geometry; and better than average in domains such as Numbers/Numeration and Computation. Comparing the Ohrenberger's average scores in these domains to those of the system (the bottom line), one can see that the students in Grade 1 at that school performed, on average, as well as other students in the system in both Fractions/Money and Measurement/Geometry, and better than other students in the system in both Numbers/Numeration and Computation.

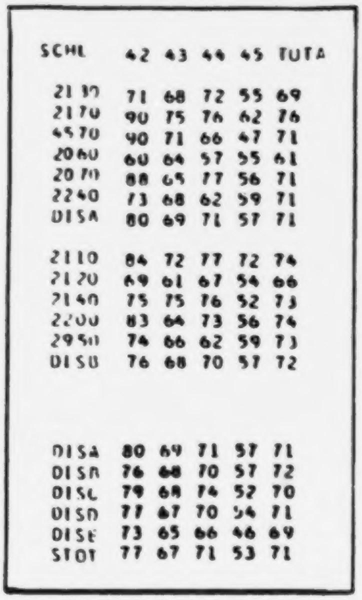


		MATHEMATICS			
SCHOOL CODE	SCHOOL NAME	NUMB./NUMER. (OUT OF 10)	FRAC./ MONEY (OUT OF 10)	MEAS./ GEOM. (OUT OF 10)	COMPUT. (OUT OF 20)
4230	HENNIGAN ELEMENTARY	07	06	08	14
4271	CURLEY ELEMENTARY	07	08	08	16
4360	MCKAY ELEMENTARY	08	07	07	14
4410	OHRENBERGER ELEMENTARY	08	07	08	16
4580	TROTTER ELEMENTARY	07	07	08	15
4610	HORACE MANN SCHOOL	03	06	08	09
4620	JACKSON MANN ELEMENTARY	07	07	08	14
DISE		07	07	08	15
DISA		07	07	08	15
DISB		07	07	08	15
DISC		07	07	08	15
DISD		08	08	09	17
DISE		07	07	08	15
STOT	SYSTEM WIDE TOTALS	07	07	08	15

Data Page (Levels 3 through High School)

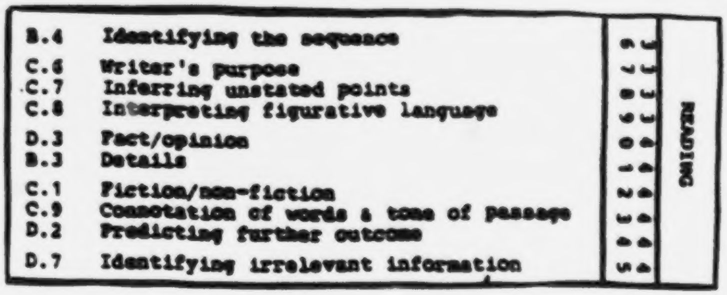
For grade levels 3 and higher, data are available for each curriculum objective and CRT item. These data are outlined in the "Data Page". The school codes are listed on the left side of the upright page, and individual CRT item numbers are across the top of the page; the last column indicates the CRT total on all items for the school. This data sheet should be used in conjunction with the preceding page that lists the correlation of the CRT items with the curriculum objectives. These comparisons should help determine which particular items or curriculum domain students in the school are mastering or not mastering, as well as to identify any pattern of curriculum performance that may be typical for the given school or district. To support this explanation, portions of the printout and the objectives correlation sheets have been reproduced below, along with an example:

Printout Sample



SCHL	42	43	44	45	TOTA
2130	71	68	72	55	69
2170	90	75	76	62	76
4570	90	71	66	47	71
2060	60	64	57	55	61
2070	88	65	77	56	71
2240	73	68	62	59	71
DISA	80	69	71	57	71
2110	84	72	77	72	74
2120	69	61	67	54	66
2140	75	75	76	52	73
2200	83	64	73	56	74
2950	74	66	62	59	73
DISB	76	68	70	57	72
DISA	80	69	71	57	71
DISB	76	68	70	57	72
DISC	79	68	74	52	70
DISD	77	67	70	54	71
DISE	73	65	66	46	69
STOT	77	67	71	53	71

Objectives Correlation Sample



B.4	Identifying the sequence	36	READING
C.6	Writer's purpose	37	
C.7	Inferring unstated points	38	
C.8	Interpreting figurative language	39	
D.3	Fact/opinion	40	
B.3	Details	41	
C.1	Fiction/non-fiction	42	
C.9	Connotation of words & tone of passage	43	
D.2	Predicting further outcome	44	
D.7	Identifying irrelevant information	45	

In this example, by reading down the column labeled 42, it can be seen that for CRT item # 42 (fiction/non-fiction) there is a range in the percent of students answering the item correctly: At the Taft (school #2170) and the Tobin (#4570) 90% of the students answered this item correctly, whereas, at the Lewis (#2060) only 60% of their students answered it correctly. Review of the Objectives Correlation Sample shows that item #42 measures objective "C.1", which taps the discrimination between fiction and non-fiction. Educationally, this suggests that students at the Lewis School may need additional review in discriminating between fiction and non-fiction, while those at the Taft and at the Tobin know those skills well. Similarly, the last column labeled "TOTAL" shows the average percent of CRT items answered correctly. Looking at the five middle schools listed for Area B, it can be seen that the Shaw (#2110) and the Thompson (#2200) had the highest average scores (74%), and both of these schools scored a bit above the District B average (i.e., 72%) as well as the system average (71%), although not by much; these schools are performing similarly and well in this particular CRT for this grade level.

ELEMENTARY SCHOOLS BY DISTRICT
AS LISTED ON PRINTOUTS

DISTRICT A

4160	GARDNER
4170	GARFIELD
4173	WINSHIP
4220	HAMILTON
4221	BALDWIN
4570	TOBIN
4571	FARRAGUT
4010	AGASSIZ
4240	ELLIS
4241	HIGGINSON
4270	J. KENNEDY
4310	LONGFELLOW
4311	MANNING
4370	MENDELL
4371	FULLER
4430	PARKMAN

DISTRICT B

4030	BEETHOVEN
4031	KILMER
4081	BATES
4082	MOZART
4290	LEE
4560	SUMNER
4561	PHILBRICK
4690	MATTAHUNT
4070	CHITTICK
4080	CONLEY
4151	TAYLOR
4190	E. GREENWOOD
4192	F. ROOSEVELT
4200	GREW
4201	CHANNING
4670	P.A. SHAW

DISTRICT C

4051	DICKERMAN
4130	S. GREENWOOD
4131	ENDICOTT
4140	EVERETT
4150	FIFIELD
4250	GOLLAND
4340	MARSHALL
4350	MATHER
4390	KENNY
4391	O'HEARN
4400	MURPHY
4550	STONE
4022	PERKINS
4052	WINTHROP
4100	DEVER
4120	EMERSON
4121	MASON
4530	RUSSELL
4531	CLAP
4590	TYNAN
4592	PERRY
4630	CONDON

DISTRICT D

4260	HURLEY
4280	KENT
4283	WARREN-PRESCOTT
4381	ELIOT
4640	BLACKSTONE
4650	QUINCY
4062	BRADLEY
4321	ALIGHIERI
4322	OTIS
4361	ADAMS
4541	P. KENNEDY
4543	O'DONNELL

DISTRICT E

4053	HERNANDEZ
4061	GUILD
4113	HALE
4210	HALEY
4230	HENNIGAN
4271	J. CURLEY
4360	MCKAY
4410	OHRENBERGER
4580	TROTTER
4610	HORACE MANN
4620	JACKSON-MANN

MIDDLE SCHOOLS BY DISTRICT
AS LISTED ON PRINTOUTS

DISTRICT A

2130	EDISON
2170	TAFT
4570	TOBIN
2060	LEWIS
2070	M. CURLEY
2240	T. ROOSEVELT

DISTRICT B

2110	R. SHAW
2120	LEWENBERG
2140	IRVING
2200	THOMPSON
2950	ROGERS

DISTRICT C

2030	CLEVELAND
2080	HOLMES
2180	WILSON
2090	GAVIN
2190	MCCORMACK
2260	DEARBORN

DISTRICT D

2010	EDWARDS
2040	TIMILITY
2050	BARNES

DISCTRICT E

2100	KING
2270	MACKEY
2980	WHEATLEY
4360	MCKAY (Gr. 6)

HIGH SCHOOLS BY DISTRICT
AS LISTED ON PRINTOUTS

DISTRICT A

1040 BRIGHTON
1110 JAMAICA PLAIN

DISTRICT B

1250 WEST ROXBURY
1100 HYDE PARK

DISTRICT C

1060 DORCHESTER
1120 BURKE
1160 SOUTH BOSTON

DISTRICT D

1050 CHARLESTOWN
1070 EAST BOSTON

DISTRICT E

1080 BOSTON ENGLISH
1190 BOSTON HIGH
1210 MADISON PARK
1240 UMANA TECH.

READING/LANGUAGE ARTS

ELEMENTARY AND MIDDLE

READING/LANGUAGE ARTS - LEVEL K

INSTRUMENT AND POPULATION DESCRIPTION

The test consists of three parts measuring selected objectives in the curriculum strands of Literal, Interpretive, and Evaluative Comprehension. The Activities Checklist (Part I), worth 30 points, is primarily designed to address speaking and listening objectives. The Small Group Test (Part II), worth 40 points, is a paper and pencil test designed to assess a child's proficiency in writing, phonics, and study skills. The Individual Test (Part III), worth 30 points, is designed to assess student proficiency in alphabet skills and understanding at different levels of comprehension.

The population includes all students enrolled in Kindergarten II who were administered an on-level test and for whom valid scores were reported.

SYSTEM STRENGTHS AND WEAKNESSES

Because of the young age of students taking this test, they responded in some cases orally and in other cases by writing directly in the test booklet, rather than on separate answer sheets. Teachers hand-scored the booklets and tabulated the oral responses and recorded the students' scores for each of the three sections on data collection sheets, thus, individual item data for analysis are not available. Overall, students performed well on the test, with a system-wide average score of 83%. On the Activities Checklist, the average score was 26 points out of a possible 30. On the Small Group Test, the average score was 34 points out of a possible 40. On the Individual Test the average score was 23 points out of a possible 30 points.

BOSTON PUBLIC SCHOOLS
CURRICULUM REFERENCE TEST JUNE 1986 AVERAGE SCORE REPORT
READING/LANGUAGE ARTS - LEVEL KII

SCHOOL CODE	SCHOOL NAME	ACTIVITIES CHECKLIST (OUT OF 30)	SMALL GROUP TEST (OUT OF 40)	INDIVIDUAL TEST (OUT OF 30)	// //
4160	GARDNER ELEMENTARY	26	35	23	/
4170	GARFIELD ELEMENTARY	24	33	21	/
4173	WINSHIP ELEMENTARY	26	33	23	/
4220	HAMILTON ELEMENTARY	25	35	22	/
4221	BALDWIN ELEMENTARY	21	30	19	/
4570	TOBIN ELEMENTARY	27	33	21	/
4571	FARRAGUT ELEMENTARY	26	37	23	/
4010	AGASSIZ ELEMENTARY	27	36	25	/
4240	ELLIS ELEMENTARY	26	33	17	/
4241	HIGGINSON ELEMENTARY	21	34	22	/
4270	J KENNEDY ELEMENTARY	27	36	25	/
4310	LONGFELLOW ELEMENTARY	28	39	28	/
4311	MANNING ELEMENTARY	27	38	21	/
4370	MENDELL ELEMENTARY	23	32	22	/
4371	FULLER ELEMENTARY	27	32	17	/
4430	PARKMAN ELEMENTARY	27	36	23	/
DISA		26	34	22	/
4030	BEETHOVEN ELEMENTARY	28	32	18	/
4031	KILMER ELEMENTARY	28	37	26	/
4081	BATES ELEMENTARY	25	33	20	/
4082	MOZART ELEMENTARY	16	32	20	/
4290	LEE ELEMENTARY	24	33	19	/
4560	SUMNER ELEMENTARY	26	32	20	/
4561	PHILBRICK ELEMENTARY	29	37	21	/

BOSTON PUBLIC SCHOOLS
CURRICULUM REFERENCE TEST JUNE 1986 AVERAGE SCORE REPORT
READING/LANGUAGE ARTS - LEVEL KII

SCHOOL CODE	SCHOOL NAME	ACTIVITIES CHECKLIST (OUT OF 30)	SMALL GROUP TEST (OUT OF 40)	INDIVIDUAL TEST (OUT OF 30)	// //
4690	MATTAHUNT ELEMENTARY	28	36	26	/
4070	CHITTICK ELEMENTARY	26	32	23	/
4080	CONLEY ELEMENTARY	30	37	30	/
4151	TAYLOR ELEMENTARY	27	35	26	/
4190	E GREENWOOD ELEMENTARY	25	33	26	/
4192	F ROOSEVELT ELEMENTARY	27	36	27	/
4200	GREW ELEMENTARY	26	35	22	/
4201	CHANNING ELEMENTARY	28	36	27	/
4670	P A SHAW ELEMENTARY	21	32	20	/
DISB		26	34	23	/
4051	DICKERMAN ELEMENTARY	27	35	21	/
4130	S GREENWOOD ELEMENTARY	27	35	25	/
4131	ENDICOTT ELEMENTARY	28	39	27	/
4140	EVERETT ELEMENTARY	24	25	24	/
4150	FIFIELD ELEMENTARY	24	35	22	/
4250	HOLLAND ELEMENTARY	29	35	24	/
4340	MARSHALL ELEMENTARY	25	35	23	/
4350	MATHER ELEMENTARY	25	33	22	/
4390	KENNY ELEMENTARY	29	37	26	/
4391	OHEARN ELEMENTARY	29	36	26	/
4400	MURPHY ELEMENTARY	29	37	24	/
4550	STONE ELEMENTARY	24	34	22	/
4022	PERKINS ELEMENTARY	26	35	24	/
4052	WINTHROP ELEMENTARY	23	33	19	/

BOSTON PUBLIC SCHOOLS
CURRICULUM REFERENCE TEST JUNE 1986 AVERAGE SCORE REPORT
READING/LANGUAGE ARTS - LEVEL KII

SCHOOL CODE	SCHOOL NAME	ACTIVITIES CHECKLIST (OUT OF 30)	SMALL GROUP TEST (OUT OF 40)	INDIVIDUAL TEST (OUT OF 30)	// //
4100	DEVER ELEMENTARY	25	31	23	/
4120	EMERSON ELEMENTARY	22	25	22	/
4121	MASON ELEMENTARY	24	35	21	/
4530	RUSSELL ELEMENTARY	27	36	27	/
4531	CLAP ELEMENTARY	29	36		/
4590	TYNAN ELEMENTARY	27	38	28	/
4592	PERRY ELEMENTARY	24	35	26	/
4630	CONDON ELEMENTARY		34	24	/
DISC		26	34	24	/
4280	KENT ELEMENTARY	28	33	19	/
4283	WPRESCOTT ELEMENTARY	25	34	24	/
4381	ELIOT ELEMENTARY	26	35	23	/
4640	BLACKSTONE ELEMENTARY	25	32	20	/
4650	QUINCY ELEMENTARY	23	34	23	/
4062	BRADLEY ELEMENTARY	27	34	20	/
4321	ALIGHIERI ELEMENTARY	28	37	27	/
4322	OTIS ELEMENTARY	28	36	25	/
4361	ADAMS ELEMENTARY	28	36	22	/
4541	P KENNEDY ELEMENTARY	26	34	20	/
4543	ODONNELL ELEMENTARY	26	33	22	/
DISD		26	34	22	/
4061	GUILD ELEMENTARY	27	37	24	/
4113	HALE ELEMENTARY	26	35	17	/
4210	HALEY ELEMENTARY	28	35	22	/

BOSTON PUBLIC SCHOOLS
CURRICULUM REFERENCE TEST JUNE 1986 AVERAGE SCORE REPORT
READING/LANGUAGE ARTS - LEVEL KII

SCHOOL CODE	SCHOOL NAME	ACTIVITIES CHECKLIST (OUT OF 30)	SMALL GROUP TEST (OUT OF 40)	INDIVIDUAL TEST (OUT OF 30)	// //
4230	HENNIGAN ELEMENTARY	23	33	22	/
4271	CURLEY ELEMENTARY	29	35	24	/
4360	MCKAY ELEMENTARY	27	35	24	/
4410	OHRENBERGER ELEMENTARY	27	36	26	/
4580	TROTTER ELEMENTARY	29	37	27	/
4610	HORACE MANN SCHOOL	23	29	18	/
4620	JACKSON MANN ELEMENTARY	27	35	25	/
DISE		27	35	24	/
DISA		26	34	22	/
DISB		26	34	23	/
DISC		26	34	24	/
DISD		26	34	22	/
DISE		27	35	24	/
STOT	SYSTEM WIDE TOTALS	26	34	23	/

READING/LANGUAGE ARTS - LEVEL 1

INSTRUMENT AND POPULATION DESCRIPTION

This is a test comprised of thirty-five multiple choice items measuring selected objectives in the curriculum strands of Study Skills/Language Structure (10 items), Literal Comprehension (8 items), Interpretive Comprehension (1 item), Evaluative Comprehension (4 items), and Vocabulary (12 items). In addition there are Dictation and Writing portions that address the objectives in the curriculum strands of Writing/the Craft and Writing/Mechanics/Usage.

The population includes all students enrolled in Grade 1 who were administered an on-level test and for whom valid scores were submitted.

SYSTEM STRENGTHS AND WEAKNESSES

Because of the young age of the students taking these tests they responded by writing directly in the test booklet, rather than on separate answer sheets. Teachers hand-scored the booklets and recorded the scores for the subtests on data collection sheets, thus individual item data for analysis are not available. Overall, students performed moderately well on this test with a system-wide average score of 75%. On the Writing portion the average score was 21 out of a possible 30 points. On the Dictation section the average score was 7 out of a possible 10 points. In Study Skills/Language Structure the average score was 9 out of a possible 10 points. In the Listening section the average score was 14 out of a possible 20 points and in Reading the average was 24 out of a possible 30 points. Students appear to be mastering the objectives in Study Skills/Language Structure, but performance is weaker in the areas of Listening and Reading.

12/24/86 TECR98002

BOSTON PUBLIC SCHOOLS
CURRICULUM REFERENCE TEST JUNE 1986 AVERAGE SCORE REPORT
READING/LANGUAGE ARTS LEVEL 1

SCHOOL CODE	SCHOOL NAME	WRITING (OUT OF 30 POINTS)	DICTATION (OUT OF 10 POINTS)	STUDY SK. L. STRUC. (OUT OF 10 ITEMS)	LISTEN. (OUT OF 10 ITEMS)	READING (OUT OF 15 ITEMS)
4690	MATTAHUNT ELEMENTARY	20	07	08	05	10
4070	CHITTICK ELEMENTARY	25	07	09	06	12
4080	CONLEY ELEMENTARY	20	09	11	06	11
4151	TAYLOR ELEMENTARY	24	07	09	06	11
4192	F ROOSEVELT ELEMENTARY	18	06	08	07	09
4200	GREW ELEMENTARY	21	08	09	11	16
4201	CHANNING ELEMENTARY	19	06	08	07	11
4670	P A SHAW ELEMENTARY	24	14	11	06	11
0150		21	07	09	07	12
4051	DICKERMAN ELEMENTARY	18	10	08	05	11
4130	S GREENWOOD ELEMENTARY	20	06	08	05	11
4131	ENDICOTT ELEMENTARY	18	06	08	05	11
4140	EVERETT ELEMENTARY	20	05	08	06	10
4150	FIFIELD ELEMENTARY	19	10	10	06	11
4250	HOLLAND ELEMENTARY	21	05	08	05	09
4350	MATHER ELEMENTARY	13	05	08	05	09
4390	KENNY ELEMENTARY	23	07	09	06	11
4391	OHEARN ELEMENTARY	21	06	08	06	10
4400	MURPHY ELEMENTARY	16	05	08	05	10
4550	STONE ELEMENTARY	21	06	08	07	12
4022	PERKINS ELEMENTARY	17	06	08	13	16
4052	WINTHROP ELEMENTARY	27	09	09	08	13
4100	DEVER ELEMENTARY	23	07	08	06	12
4120	EMERSON ELEMENTARY	21	05	08	05	09

12/24/86 TECR98J02

BOSTON PUBLIC SCHOOLS
CURRICULUM REFERENCE TEST JUNE 1986 AVERAGE SCORE REPORT
READING/LANGUAGE ARTS LEVEL 1

SCHOOL CODE	SCHOOL NAME	WRITING (OUT OF 30 POINTS)	DICTATION (OUT OF 10 POINTS)	STUDY SK. L. STRUC. (OUT OF 10 ITEMS)	LISTEN. (OUT OF 10 ITEMS)	READING (OUT OF 15 ITEMS)
4160	GARDNER ELEMENTARY	20	08	09	08	12
4170	GARFIELD ELEMENTARY	22	07	09	06	10
4173	WINSHIP ELEMENTARY	22	08	08	07	11
4220	HAMILTON ELEMENTARY	18	05	07	04	10
4221	BALDWIN ELEMENTARY	23	06	09	06	11
4570	TOBIN ELEMENTARY	18	06	09	07	12
4571	FARRAGUT ELEMENTARY	26	07	08	07	12
4010	AGASSIZ ELEMENTARY	19	08	10	05	10
4240	ELLIS ELEMENTARY	10	05	08	06	11
4241	HIGGINSON ELEMENTARY	21	06	09	07	12
4270	J KENNEDY ELEMENTARY	23	07	08	06	11
4310	LONGFELLOW ELEMENTARY	25	06	08	05	10
4311	MANNING ELEMENTARY	24	07	09	08	12
4370	MENDELL ELEMENTARY	25	09	09	06	12
4371	FULLER ELEMENTARY	21	13	11	06	11
4430	PARKMAN ELEMENTARY	21	07	09	08	13
01SA		21	07	09	06	11
4030	BEETHOVEN ELEMENTARY	26	06	09	07	11
4031	KILMER ELEMENTARY	24	06	08	06	11
4081	BATES ELEMENTARY	24	07	09	07	11
4082	MOZART ELEMENTARY	17	07	09	09	15
4293	LEE ELEMENTARY	25	06	09	06	11
4560	SUMNER ELEMENTARY	19	06	09	06	11
4561	PHILBRICK ELEMENTARY	20	06	08	06	11

12/24/86

TE:R98002

BOSTON PUBLIC SCHOOLS
CURRICULUM REFERENCE TEST JUNE 1986 AVERAGE SCORE REPORT
READING/LANGUAGE ARTS LEVEL 1

SCHOOL CODE	SCHOOL NAME	WRITING (OUT OF 30 POINTS)	DICTATION (OUT OF 10 POINTS)	STUDY SK. L. STRUC. (OUT OF 10 ITEMS)	LISTEN. (OUT OF 10 ITEMS)	READING (OUT OF 15 ITEMS)
4121	MASON ELEMENTARY	22	05	09	08	13
4530	RUSSELL ELEMENTARY	23	07	09	07	12
4531	CLAP ELEMENTARY	17	05	09	05	12
4590	TYNAN ELEMENTARY	25	07	09	07	12
4592	PERRY ELEMENTARY	23	05	08	05	10
4630	CONDON ELEMENTARY	19	06	08	06	11
DISC		20	06	08	06	11
4280	KENT ELEMENTARY	20	07	09	08	14
4283	WPRESCOTT ELEMENTARY	22	09	09	06	12
4381	ELIOT ELEMENTARY	21	07	09	06	12
4640	BLACKSTONE ELEMENTARY	15	06	08	09	15
4650	QUINCY ELEMENTARY	19	05	08	06	11
4062	BRADLEY ELEMENTARY	24	05	09	07	11
4321	ALIGHIERI ELEMENTARY	22	07	09	09	14
4322	OTIS ELEMENTARY	17	06	09	08	12
4361	ADAMS ELEMENTARY	27	08	09	06	13
4541	P KENNEDY ELEMENTARY	26	07	09	07	13
4543	ODONNELL ELEMENTARY	25	08	09	07	12
DISD		20	07	09	07	13
4053	HERNANDEZ ELEMENTARY	26	24	17	18	12
4061	GUILD ELEMENTARY	24	07	09	08	10
4113	HALE ELEMENTARY	22	06	09	07	11
4210	HALEY ELEMENTARY	18	06	09	08	12
4230	HENNIGAN ELEMENTARY	23	09	09	07	09

BOSTON PUBLIC SCHOOLS
CURRICULUM REFERENCE TEST JUNE 1986 AVERAGE SCORE REPORT
READING/LANGUAGE ARTS LEVEL 1

SCHOOL CODE	SCHOOL NAME	WRITING (OUT OF 30 POINTS)	DICTATION (OUT OF 10 POINTS)	STUDY SK. L. STRUC. (OUT OF 10 ITEMS)	LISTEN. (OUT OF 10 ITEMS)	READING (OUT OF 15 ITEMS)
4271	CURLEY ELEMENTARY	24	07	09	07	12
4360	MCKAY ELEMENTARY	19	06	08	07	10
4410	OHRENBERGER ELEMENTARY	15	06	09	07	11
4580	TROTTER ELEMENTARY	23	06	08	06	11
4610	HORACE MANN SCHOOL	19	10	05	03	05
4620	JACKSON MANN ELEMENTARY	21	12	08	05	10
DISE		21	09	09	08	11
DISA		21	07	09	06	11
DISB		21	07	09	07	12
DISC		20	06	08	06	11
DISD		20	07	09	07	13
DISE		21	09	09	08	11
STOT	SYSTEM WIDE TOTALS	21	07	09	07	12

READING/LANGUAGE ARTS - LEVEL 2

INSTRUMENT AND POPULATION DESCRIPTION

This is a test comprised of forty multiple choice items measuring selected objectives in the curriculum strands of Study/Skills/Language Structure (10 items), Literal Comprehension (12 items), Interpretive Comprehension (5 items), Evaluative Comprehension (8 items), and Vocabulary (5 items). In addition there are Dictation and Writing portions that address the objectives in the curriculum strands of Writing/the Craft and Writing/Mechanics/Usage. The test serves as both the final examination and the State Basic Skills Test for grade 2 students.

The population includes all students enrolled in Grade 2 who were administered an on-level test and for whom valid scores were reported.

SYSTEM STRENGTHS AND WEAKNESSES

The young age of the students taking these tests necessitated their writing directly in the test booklets, rather than on separate answer sheets. Teachers hand-scored the booklets and recorded the students' total scores on data collection sheets, thus individual item data for analysis are not available. Overall, students performed moderately well on this test with a system-wide average score of 78%. On the Writing portion the average score was 23 out of a possible 30 points. On the Dictation section the average score was 6 out of a possible score of 10. On the Study Skills/Language Arts section the average score was 7 out of a possible 10 points. The average score on the Listening section was 14 out of a possible 20 points and on the Reading portion the average was 28 out of a possible 40 points. Students appear to be functioning well in Writing, Dictation, and Study Skills/ Language Structure, but are experiencing some difficulty with the comprehension objectives that are tapped in the Listening and Reading sections of the test.

12/24/85 BOSTON PUBLIC SCHOOLS TECR100002

CURRICULUM REFERENCE TEST JUNE 1986 AVERAGE SCORE REPORT

READING/LANGUAGE ARTS LEVEL 2

SCHOOL CODE	*SCHOOL NAME	CURRENT GRADE	WRITING (OUT OF 30 POINTS)	DICTATION (OUT OF 10 POINTS)	STUDY SK. L. STRUC. (OUT OF 10 ITEMS)	LISTEN. (OUT OF 10 ITEMS)	BASIC SK. READING (OUT OF 20 ITEMS)
4160	GARDNER ELEMENTARY		26	07	07	08	16
4170	GARFIELD ELEMENTARY		25	08	08	07	15
4173	WINSHIP ELEMENTARY		27	08	08	08	14
4220	HAMILTON ELEMENTARY		21	06	07	08	17
4221	BALDWIN ELEMENTARY		23	05	08	06	13
4570	TOBIN ELEMENTARY		22	07	07	08	15
4571	FARRAGUT ELEMENTARY		23	06	07	07	13
4010	AGASSIZ ELEMENTARY		24	07	09	07	13
4240	ELLIS ELEMENTARY		23	05	06	06	13
4241	HIGGINSON ELEMENTARY		24	07 *	07	07	14
4270	J KENNEDY ELEMENTARY		25	07	08	07	13
4310	LONGFELLOW ELEMENTARY		17	05	06	05	09
4311	MANNING ELEMENTARY		26	07	09	08	17
4370	MENDELL ELEMENTARY		25	07	08	07	14
4371	FULLER ELEMENTARY		24	08	07	06	14
4430	PARKMAN ELEMENTARY		26	07	09	08	16
DISA			24	06	07	07	14
4030	BEETHOVEN ELEMENTARY		25	07	07	07	14
4031	KILMER ELEMENTARY		28	07	08	08	15
4081	BATES ELEMENTARY		26	06	07	07	13
4082	MOZART ELEMENTARY		26	08	08	07	16
4290	LEE ELEMENTARY		25	07	09	08	16
4560	SUMNER ELEMENTARY		25	06	07	07	14

BOSTON PUBLIC SCHOOLS
CURRICULUM REFERENCE TEST JUNE 1986 AVERAGE SCORE REPORT
READING/LANGUAGE ARTS LEVEL 2

SCHOOL CODE	*SCHOOL NAME	CURRENT GRADE	WRITING (OUT OF 30 POINTS)	DICTATION (OUT OF 10 POINTS)	STUDY SK. L. STRUC. (OUT OF 10 ITEMS)	LISTEN. (OUT OF 10 ITEMS)	BASIC SK. READING (OUT OF 20 ITEMS)
4561	PHILBRICK ELEMENTARY		23	05	07	08	17
4690	MATTAHUNT ELEMENTARY		21	05	07	07	13
4070	CHITTICK ELEMENTARY		28	08	09	09	16
4080	CONLEY ELEMENTARY		17	06	06	05	11
4151	TAYLOR ELEMENTARY		21	07	07	07	14
4192	F ROOSEVELT ELEMENTARY		25	06	08	07	16
4200	GREW ELEMENTARY		23	07	07	07	14
4201	CHANNING ELEMENTARY		21	06	08	07	14
4670	P A SHAW ELEMENTARY		21	07	07	06	13
DISB			23	06	07	07	14
4051	DICKERMAN ELEMENTARY		23	07	08	06	13
4130	S GREENWOOD ELEMENTARY		21	04	06	05	08
4131	ENDICOTT ELEMENTARY		23	07	07	07	14
4140	EVERETT ELEMENTARY		20	05	05	06	14
4150	FIFIELD ELEMENTARY		22	07	08	07	14
4250	HOLLAND ELEMENTARY		21	06	07	08	14
4340	MARSHALL ELEMENTARY		24	06	06	07	11
4350	MATHER ELEMENTARY		23	06	08	08	13
4390	KENNY ELEMENTARY		22	07	07	07	16
4391	OHEARN ELEMENTARY		25	07	07	07	15
4400	MURPHY ELEMENTARY		25	07	07	08	15
4550	STONE ELEMENTARY		25	07	07	07	16
4022	PERKINS ELEMENTARY		26	07	07	07	16

BOSTON PUBLIC SCHOOLS
CURRICULUM REFERENCE TEST JUNE 1986 AVERAGE SCORE REPORT
READING/LANGUAGE ARTS LEVEL 2

SCHOOL CODE	*SCHOOL NAME	CURRENT GRADE	WRITING (OUT OF 30 POINTS)	DICTATION (OUT OF 10 POINTS)	STUDY SK. L. STRUC. (OUT OF 10 ITEMS)	LISTEN. (OUT OF 10 ITEMS)	BASIC SK. READING (OUT OF 20 ITEMS)
4052	WINTHROP ELEMENTARY		24	06	09	08	16
4100	DEVER ELEMENTARY		22	07	07	07	14
4120	EMERSON ELEMENTARY		22	07	08	07	15
4121	MASON ELEMENTARY		25	05	07	08	15
4530	RUSSELL ELEMENTARY		25	07	07	07	16
4531	CLAP ELEMENTARY		26	08	08	09	17
4590	TYNAN ELEMENTARY		28	07	08	07	16
4592	PERRY ELEMENTARY		24	07	09	08	15
4630	CONDON ELEMENTARY		24	07	08	08	14
DISC			23	06	07	07	14
4280	KENT ELEMENTARY		22	05	08	07	16
4283	WPRESCOTT ELEMENTARY		24	09	09	07	15
4381	ELIOT ELEMENTARY		22	07	08	07	15
4640	BLACKSTONE ELEMENTARY		23	06	08	06	13
4650	QUINCY ELEMENTARY		23	06	07	08	14
4062	BRADLEY ELEMENTARY		29	05	07	08	14
4321	ALIGHIERI ELEMENTARY		20	06	06	07	13
4322	OTIS ELEMENTARY		21	06	07	07	15
4361	ADAMS ELEMENTARY		25	08	08	09	16
4541	P KENNEDY ELEMENTARY		26	07	07	08	16
4543	ODONNELL ELEMENTARY		25	06	07	07	15
DISD			23	07	08	07	14
4053	HERNANDEZ ELEMENTARY		26	06	06	07	13

BOSTON PUBLIC SCHOOLS
CURRICULUM REFERENCE TEST JUNE 1986 AVERAGE SCORE REPORT
READING/LANGUAGE ARTS LEVEL 2

SCHOOL CODE	*SCHOOL NAME	CURRENT GRADE	WRITING (OUT OF 30 POINTS)	DICTATION (OUT OF 10 POINTS)	STUDY SK. L. STRUC. (OUT OF 10 ITEMS)	LISTEN. (OUT OF 10 ITEMS)	BASIC SK. READING (OUT OF 20 ITEMS)
4061	GUILD ELEMENTARY		26	07	07	07	14
4113	HALE ELEMENTARY		24	07	07	07	15
4210	HALEY ELEMENTARY		28	07	07	08	16
4230	HENNIGAN ELEMENTARY		26	07	07	06	12
4271	CURLEY ELEMENTARY		20	06	08	08	14
4360	MCKAY ELEMENTARY		24	05	07	06	11
4410	OHRENBERGER ELEMENTARY		25	07	06	07	14
4580	TROTTER ELEMENTARY		23	06	07	07	15
4610	HORACE MANN SCHOOL		23	10	06	06	10
4620	JACKSON MANN ELEMENTARY		24	07	07	06	12
DISE			24	07	07	07	13
DISA			24	06	07	07	14
DISB			23	06	07	07	14
DISC			23	06	07	07	14
DISD			23	07	08	07	14
DISE			24	07	07	07	13
STOT	SYSTEM WIDE TOTALS		23	06	07	07	14

SYSTEM SUMMARY ANALYSIS

READING/LANGUAGE ARTS

LEVELS 3-8

DESCRIPTION OF INSTRUMENTS

Each test for Levels 3-7 is comprised of multiple choice items measuring selected objectives in the curriculum strands of Study Skills, Language Structure, Literal Comprehension, Interpretive Comprehension, Evaluative Comprehension, and Vocabulary. In addition there are Dictation (Gr. 3-5) and Writing portions (Gr. 3-7) that address the objectives in the curriculum strands of Writing/the Craft and Writing/Mechanics/Usage. The Level 8 test is a fifty-five item instrument developed by the State Department and mandated for Grade 8 students. Since it broadly correlates with the curriculum objectives and in the interest of limiting testing, the instrument serves both the State and system requirements.

DESCRIPTION OF CHART

On the following page a chart is provided that identifies problematic reading and vocabulary items and corresponding objectives at each level. The items identified are those which fewer than 60% of the students answered correctly.

GENERAL TRENDS

Generally, performance is good on the Literal Comprehension, Vocabulary, and Study Skills objectives with approximately seventy to eighty percent of the students answering the items correctly. However, performance tends to decrease in the items that measure Interpretive and Evaluative Comprehension and Language Structure. In these domains there is a greater percentage of items answered incorrectly by students.

CURRICULUM REFERENCED TEST ANALYSIS
1985 - 1986
DEPARTMENT OF EDUCATIONAL TESTING
READING/LANGUAGE ARTS Grades 3 - 8

LEVEL	ITEM #	% ANSWERING CORRECTLY	OBJECTIVE NUMBER	OBJECTIVE DESCRIPTION
3	25	51%	D.3	fact/opinion
	30	58%	C.4	inferring cause/effect
	49	49%	D.3	fact/opinion
	50	52%	D.3	fact/opinion
4	23	58%	C.5	main plot/subplot
	25	52%	D.3	fact/opinion
	27	57%	D.3	fact/opinion
	29	43%	B.3	details
	42	51%	C.1	fiction/non-fiction
	44	34%	C.5	main plot/subplot
5	21	48%	C.2	key points
	22	43%	C.3	inferring traits, motives
	23	56%	C.4	inferring cause/effect
	33	52%	C.1	fiction/non-fiction
	51	50%	C.4	inferring cause/effect
	52	56%	C.3	inferring traits, motives
	53	51%	D.2	predicting further outcome
	54	38%	B.2	main idea
	56	43%	E.2	synonyms
	58	42%	E.2	antonyms
	59	56%	E.2	antonyms
	60	58%	E.3	word meanings
	61	59%	E.3	word meanings
	64	59%	E.4	homonyms
6	3	41%	C.4	inferring cause/effect
	28	51%	E.2	antonyms
	35	50%	E.4	homonyms
	36	57%	B.4	identifying sequence
	43	51%	C.4	inferring cause/effect
7	3	56%	C.2	key points
	28	58%	E.2	antonyms
	37	56%	C.6	writer's purpose
	45	53%	D.7	irrelevant information
8 *	5	37%	N.A.	meaning of words in sentence
	6	35%	N.A.	writer's purpose
	10	59%	N.A.	fact/opinion
	11	59%	N.A.	sequence of events
	12	34%	N.A.	drawing conclusions
	18	50%	N.A.	writer's purpose
	19	52%	N.A.	meaning of words in sentence
	25	59%	N.A.	fact/opinion
	40	33%	N.A.	drawing conclusions
	45	58%	N.A.	main idea, supp. details
	50	57%	N.A.	drawing conclusions

---

* Basic Skills Test

READING/LANGUAGE ARTS - LEVEL 3

INSTRUMENT AND POPULATION DESCRIPTION

This is a test comprised of fifty multiple choice items measuring selected objectives in the curriculum strands of Study Skills (10 items), Language Structure (10 items), Literal Comprehension (6 items), Interpretive Comprehension (5 items), Evaluative Comprehension (9 items), Vocabulary (10 items). In addition there are Dictation and Writing portions that address the objectives in the curriculum strands of Writing/the Craft and Writing/Mechanics/Usage.

The test was organized according to the following domains with each domain containing 10 items: Study Skills, Language Structure, Listening, Vocabulary, and Reading.

The population includes all students enrolled in grade 3 who took an on-level test and for whom valid answer sheets were submitted.

SYSTEM STRENGTHS AND WEAKNESSES

Overall, students performed well on this test with a systemwide average score on the items of 80%. Generally, students appear to be mastering the objectives in Study Skills, Literal Comprehension, and Vocabulary and most of the items in Language Structure and Interpretive Comprehension. However, within these latter two domains there are isolated objectives which are not being mastered by more than forty percent of the students. Within Language Structure, students are having difficulty with syllabication (item #20). Within Interpretive Comprehension, students are having difficulty with inferring cause and effect relationships (item # 30).

The most deficits as a strand can be found in the Evaluative Comprehension area. All three items that measure fact/opinion (item #'s 25, 49, and 50) were answered correctly by fewer than sixty percent of the students.

BOSTON PUBLIC SCHOOLS

DEPARTMENT OF EDUCATIONAL TESTING

CURRICULUM REFERENCED FINAL

READING/LANGUAGE ARTS - LEVEL 3

1985 - 1986

STUDY SKILLS	1	J.3	Putting words into alph. order
	2	J.3	
	3	J.3	
	4	J.3	
	5	J.4	Unorganized info. into categories
	6	J.4	
	7	J.4	
	8	J.5	Using parts of book to find info.
	9	J.5	
	10	J.5	
LANGUAGE STRUCTURE	11	K.1	Identifying types of sentences
	12	K.1	
	13	K.1	
	14	K.1	
	15	K.2	Identifying comp. wds., pref.,& suff.
	16	K.2	
	17	K.3	Identifying parts of speech
	18	K.3	
	19	K.4	Syllabication
	20	K.4	
LISTENING	21	B.2	Main idea
	22	C.4	Inferring cause and effect relation.
	23	D.1	Drawing comparisons w. own experience
	24	D.2	Predicting further outcome
	25	D.3	Fact/opinion
	26	B.2	Main idea
	27	B.3	Identifying details
	28	B.3	
	29	D.1	Drawing comparisons w. own experience
	30	C.4	Inferring cause and effect relation.
VOCABULARY	31	E.2	Synonyms
	32	E.2	
	33	E.2	Antonyms
	34	E.2	
	35	E.3	Word meanings
	36	E.3	
	37	E.5	Multiple meanings
	38	E.5	
	39	E.4	Homonyms
	40	E.4	
READING	41	C.2	Identifying key points
	42	C.3	Inferring traits, feelings, & motives
	43	C.4	Inferring cause and effect relation.
	44	D.1	Drawing comparisons w. own experience
	45	D.2	Predicting further outcome
	46	B.2	Main idea
	47	B.3	Identifying details
	48	D.2	Predicting further outcome
	49	D.3	Fact/opinion
	50	D.3	

```
 931 MD LEVL 3          TCCRS005          11/07/86
PERCENTAGE OF CORRECT ANSWERS PER ITEM
NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY **

SCHL    1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40  41 42 43 44 45 46 47 48 49 50 TOTAL

4160   75 48 62 64 ** 91 94 97 94 ** 97 83 81 83 91 ** 37 91 72 67 91 86 81 ** 67 89 86 97 94 67 89 ** 91 94 91 89 89 91 89 94  97 94 83 81 89 86 94 81 64 51 84
4170   91 69 95 52 95 91 95 ** ** 95 82 82 86 62 91 82 60 56 91 60 95 66 86 95 56 86 86 ** 91 74 86 86 91 69 78 78 60 91 91 **  82 91 82 69 91 82 82 65 69 56 82
4173   85 80 70 70 ** ** ** ** ** 95 ** 90 85 90 95 95 70 85 65 45 95 65 75 90 65 85 95 95 90 80 85 90 95 80 95 90 80 95 95 95  70 95 80 80 75 85 85 70 50 65 84
4220   80 76 84 57 88 84 92 84 84 92 84 76 80 84 80 92 57 76 69 50 80 88 76 92 42 64 84 92 66 50 96 96 92 88 84 92 80 96 84 88  80 92 76 80 80 84 86 80 53 65 81
4221   79 83 83 45 95 95 87 95 87 91 ** 95 83 70 83 ** 54 66 70 45 95 ** 70 ** 75 87 66 95 75 70 66 87 87 91 83 91 83 87 83 **  87 95 83 62 91 70 87 62 75 62 81
4570   87 64 74 69 94 82 94 97 92 92 92 82 92 89 87 92 84 74 58 43 92 84 66 ** 51 87 69 97 94 66 61 89 87 92 82 84 79 84 92 94  89 94 82 66 76 74 79 53 23 51 79
4571   71 57 46 75 85 89 85 96 85 85 89 85 71 78 85 82 57 67 67 71 ** 67 71 92 28 75 85 96 89 57 89 85 96 64 85 ** 60 82 92 89  85 92 82 75 82 75 92 67 39 35 77
4010   80 80 68 76 93 87 97 ** ** 95 97 80 80 93 95 91 57 78 82 68 97 70 72 95 42 72 87 89 85 51 76 91 97 78 87 93 76 91 89 95  82 93 80 85 87 74 85 74 68 68 83
4240   82 74 69 53 87 76 87 87 82 84 86 76 56 82 56 74 53 58 58 51 84 69 74 82 43 64 64 79 71 35 56 69 76 61 53 66 66 71 66 76  74 82 64 61 71 69 64 38 28 28 67
4241   91 78 86 47 ** 95 ** 95 95 95 95 91 95 ** ** ** 86 91 ** ** ** 95 95 ** 65 91 ** 95 ** 73 95 91 95 86 ** 95 95 ** 91 **  95 ** ** 86 91 78 91 95 91 69 92
4270   93 90 84 72 96 93 93 ** 93 ** ** 87 87 ** 96 90 66 78 84 63 ** 87 81 ** 75 87 81 96 90 60 90 93 96 66 87 93 81 96 90 93  90 ** 87 90 ** 87 96 75 72 66 88
4310   75 75 64 50 ** ** 96 96 96 96 96 85 82 82 85 85 50 71 78 60 96 82 75 96 28 85 89 ** 89 67 78 89 89 67 82 ** 96 89 89 96  92 ** 82 75 85 71 89 46 50 39 81
4311   71 61 76 57 95 80 95 ** 80 85 95 80 80 95 76 90 47 85 85 61 95 80 76 ** 52 71 71 95 85 42 71 80 ** 80 85 95 71 90 95 95  ** 90 80 95 95 85 95 80 66 66 82
4370   96 59 74 59 96 92 92 92 74 92 ** 85 62 92 74 96 55 81 74 44 ** 74 81 96 59 74 70 96 96 55 88 88 80 70 88 81 85 92 ** 96  88 ** 92 74 77 70 85 66 59 62 81
4371   96 87 82 70 98 96 98 93 95 93 95 84 90 90 90 96 62 85 70 65 93 92 79 96 40 71 90 98 95 57 92 87 92 76 78 87 70 90 92 93  93 89 81 71 82 84 85 56 50 50 85
4430   80 83 76 60 93 93 ** 90 83 83 96 76 80 90 83 83 90 93 73 66 90 90 82 93 86 90 90 93 96 80 76 90 96 86 86 ** 90 93 90 96  86 ** 80 63 86 66 83 73 63 80 85
DISA   84 74 74 63 95 90 94 95 90 92 94 83 81 88 86 90 61 78 74 60 94 83 77 95 53 80 82 94 89 60 81 88 91 78 83 89 78 89 89 93  87 93 81 75 84 77 86 66 55 56 91

4330   73 63 78 52 94 94 ** ** 94 89 ** 84 78 69 73 ** 26 73 78 57 ** 94 63 89 21 73 57 ** 89 42 73 78 ** 84 89 89 86 84 89 **  ** ** 73 73 69 78 73 68 57 63 77
4031   66 71 76 57 ** ** ** 95 90 95 85 85 76 90 85 95 61 71 80 52 80 80 61 95 76 76 80 95 90 52 66 95 95 76 90 85 85 90 80 95  85 95 80 61 95 85 80 66 66 71 81
4081   87 84 75 63 93 90 96 ** 93 96 96 84 69 84 96 93 51 84 72 48 ** 72 81 ** 30 81 87 ** 84 60 84 90 96 84 75 90 84 90 75 **  87 96 90 75 87 81 81 45 24 45 81
4082   80 52 76 61 95 66 95 85 85 95 95 80 80 76 80 85 61 66 52 33 90 80 66 95 47 71 85 95 95 66 ** 90 90 71 80 85 90 90 90 **  85 95 76 71 85 66 80 76 33 38 76
4290   88 73 80 60 91 91 84 95 84 91 88 77 68 86 75 82 37 62 68 51 80 80 77 88 53 60 68 91 84 48 82 75 88 71 82 86 68 82 91 91  77 91 86 64 77 66 77 60 31 53 73
4560   75 55 72 62 93 94 94 94 91 98 93 86 77 89 89 96 68 79 79 67 93 81 86 ** 44 84 87 96 91 70 82 84 91 60 91 91 68 91 93 **  91 94 84 72 86 77 70 62 55 41 81
4561   78 73 86 52 86 82 95 95 86 86 86 82 56 95 91 82 56 69 86 47 ** 65 60 95 60 69 82 91 86 43 86 95 86 60 82 91 82 78 95 **  91 91 82 86 91 82 91 60 21 56 79
4690   77 72 72 61 95 92 95 90 86 87 86 74 80 87 80 88 61 69 62 50 91 76 70 92 44 69 81 93 91 49 69 87 87 83 87 95 79 95 86 97  92 97 92 77 93 77 83 54 51 50 77
4070   80 72 89 67 94 89 89 90 90 85 89 87 85 89 85 87 78 72 74 76 94 83 89 90 60 85 80 90 83 72 83 81 90 80 83 80 69 83 83 90  87 92 85 76 76 76 80 63 50 52 81
4080   ** 76 80 76 ** 84 ** ** 96 ** 92 88 80 84 92 ** 60 72 88 52 ** 88 84 ** 76 96 96 ** 80 56 84 ** ** 88 88 ** 88 ** 88 **  94 96 84 60 84 96 92 80 76 66 67
4151   73 71 83 46 98 98 98 ** 88 98 93 91 81 98 96 ** 73 81 91 66 98 83 75 96 70 88 78 98 93 50 81 96 96 86 78 90 81 98 88 98  98 96 85 73 96 80 95 73 46 66 85
4190   92 77 82 73 92 87 88 88 88 88 84 85 79 84 84 85 68 71 73 65 93 85 79 95 61 85 69 90 88 71 77 84 87 80 85 84 74 90 85 98  82 88 85 80 80 87 85 74 57 42 81
4192   93 96 93 76 90 90 96 96 96 96 93 83 93 90 86 86 63 83 80 60 96 90 73 93 66 86 90 83 86 40 83 93 96 73 86 90 96 93 90 93  80 96 86 73 83 80 93 76 43 46 84
4200   86 82 95 82 ** ** 95 91 ** ** 95 86 86 86 91 ** 43 86 69 52 ** 95 78 ** 52 95 ** ** 78 73 78 ** 95 78 ** ** 91 ** 91 95  95 ** 95 73 91 95 91 65 56 69 87
4201   77 80 86 52 94 94 94 91 91 94 97 88 80 86 80 97 55 72 80 55 94 80 63 97 47 88 88 94 86 69 86 91 88 61 83 91 80 91 94 **  88 94 94 86 88 77 86 69 58 63 82
4670   89 78 78 73 ** 89 84 94 89 94 78 68 57 78 84 84 52 57 84 78 78 68 57 89 52 73 68 94 89 52 73 68 84 68 84 84 84 78 84 89  78 89 68 68 78 68 73 52 63 52 76
DISB   82 73 81 63 94 91 93 93 90 92 90 83 78 87 85 91 60 73 75 58 93 81 75 94 54 80 81 94 88 58 80 87 91 76 85 90 79 90 87 96  88 94 86 74 86 79 83 65 49 53 81

4351   ** 72 81 64 ** 86 ** ** 94 94 97 81 72 94 81 78 67 81 75 64 ** 75 59 91 62 83 78 91 91 56 78 86 86 62 89 86 67 72 83 97  64 86 81 67 78 75 78 51 43 27 76
4130   77 69 77 44 94 94 94 97 86 88 83 86 72 86 83 94 63 86 72 66 91 77 72 94 38 75 72 94 88 72 77 86 97 75 86 91 69 94 88 88  86 91 88 72 80 72 75 61 41 33 79
4131   82 75 75 51 79 93 79 79 72 82 79 79 65 72 72 86 55 55 62 58 89 65 62 89 34 82 55 86 82 41 82 68 93 75 62 80 62 72 78 89  72 79 72 62 79 62 65 58 27 37 70
4140   85 85 85 51 77 85 92 92 96 96 96 85 77 85 96 85 51 74 59 51 88 74 74 96 40 81 92 92 92 70 77 85 96 70 77 92 92 81 96 **  92 88 77 77 88 88 81 66 29 48 83
4150   81 74 86 67 90 88 90 90 90 97 95 83 79 88 88 90 53 74 74 51 97 74 76 97 53 90 79 93 83 58 86 95 95 72 90 97 72 93 88 **  86 95 79 69 86 79 83 62 51 58 81
4250   74 64 67 58 84 83 87 90 86 87 90 70 65 80 69 79 49 67 62 40 91 67 81 88 40 73 68 88 84 44 66 82 85 72 76 83 68 81 83 92  86 89 77 67 77 66 77 56 44 41 73
4340   77 68 83 46 92 87 93 88 82 77 87 78 71 87 67 83 47 69 54 47 88 68 69 88 46 68 75 88 81 48 84 80 87 68 70 84 64 76 75 89  86 88 75 75 75 71 68 49 47 45 73
4350   83 77 83 74 87 80 83 83 80 80 80 74 70 81 77 83 50 67 63 50 93 83 68 94 44 75 84 96 87 68 72 81 81 67 70 80 66 81 87 92  76 90 80 71 80 74 84 61 46 49 76
4390   91 37 87 66 ** ** ** 83 75 75 91 70 75 83 91 91 79 75 79 79 87 83 54 ** 54 79 83 95 83 66 79 91 95 66 87 87 66 95 95 95  87 95 87 75 87 62 91 66 58 33 80
4391   73 60 69 60 91 86 95 95 95 91 91 78 65 95 86 95 86 78 86 78 91 82 69 ** 56 86 95 ** 95 60 86 86 95 73 86 ** 91 95 ** 95  91 95 86 86 ** 86 91 78 43 65 84
4400   70 70 68 41 84 86 88 92 84 86 88 64 72 88 80 94 52 68 76 47 98 86 82 88 47 92 84 92 94 62 72 76 92 82 82 78 76 86 84 98  82 96 86 68 90 76 84 60 43 59 78
4550   ** 87 70 58 ** 95 ** 95 91 95 95 79 75 79 91 83 83 87 83 66 95 75 67 ** 87 83 87 87 95 66 91 87 87 62 83 83 70 95 83 87  ** 91 83 79 91 83 91 50 16 62 81
4022   ** 77 81 68 81 90 86 90 95 90 95 72 68 72 90 81 63 77 68 40 95 77 77 95 72 90 86 95 81 45 90 90 95 86 86 86 86 86 ** **  95 90 90 81 95 77 90 72 27 63 82
```

47

```
931 RD LEVL 3          TECR5005             11/07/86
PERCENTAGE OF CORRECT ANSWERS PER ITEM
NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY **

SCHL   1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40   41 42 43 44 45 46 47 48 49 50 TOTAL

4052  81 68 81 56 ** 81 87 93 93 ** 81 93 88 81 87 ** 18 81 81 50 87 75 56 ** 31 75 75 ** 87 43 75 87 ** 75 ** ** 87 87 93 93   ** 93 ** 75 87 75 93 93 56 31 80
4100  66 60 70 58 87 77 91 89 87 89 83 75 75 85 79 85 68 81 66 43 95 77 77 95 45 72 81 97 85 54 81 83 79 70 68 81 58 81 81 98   87 95 75 62 85 81 70 58 54 52 76
4120  95 95 ** 85 95 90 95 95 ** 95 ** 76 95 ** 85 95 85 80 71 57 95 85 95 95 52 90 ** ** 80 66 90 95 95 85 85 95 85 ** 90 **   85 ** 90 57 90 71 66 76 80 47 86
4121  88 76 70 52 ** ** 94 ** ** 94 ** 94 82 ** 94 94 29 88 70 58 ** 88 76 ** 35 88 88 ** 88 58 ** ** ** ** 76 94 82 94 94 **   88 94 94 70 94 82 82 70 41 41 84
4530  84 71 80 53 88 91 93 95 95 93 86 71 84 84 82 84 40 73 55 31 91 80 68 93 48 82 86 95 88 71 82 77 86 75 75 91 62 88 95 86   80 95 86 71 82 80 77 55 37 42 77
4531  88 94 83 61 83 94 83 94 94 88 88 77 77 83 88 77 27 66 61 61 83 77 66 94 77 77 77 ** 86 77 88 83 ** 83 50 88 72 94 77 94   88 94 94 61 77 77 83 55 16 55 78
4590  83 77 83 66 88 83 94 88 83 83 88 88 72 72 77 83 66 77 66 50 94 83 55 88 38 77 88 88 83 55 77 83 ** 72 83 88 88 94 88 94   94 83 83 44 83 83 88 66 27 55 76
4592  90 72 81 72 ** ** ** 90 ** ** 90 63 54 72 90 90 ** 90 63 45 ** ** 81 ** 36 ** 63 90 90 72 81 ** 90 81 ** 72 81 ** ** **   ** ** 81 72 ** 90 81 45 54 63 84
4630  98 88 89 46 ** 96 98 94 90 93 94 88 75 85 84 96 76 81 76 67 93 84 71 98 52 84 89 98 90 61 92 93 93 89 93 89 76 96 98 96   98 93 88 84 93 78 84 63 47 52 84
DISC  83 73 79 57 90 88 91 91 87 88 89 77 73 84 80 86 57 74 67 52 92 77 72 93 48 80 80 93 87 58 80 84 90 74 79 86 71 86 87 96   85 91 82 71 84 75 79 60 43 47 78

4260  86 77 88 72 ** 94 97 97 94 91 97 77 86 97 88 88 66 86 63 63 91 88 52 ** 50 94 88 97 94 83 72 77 94 69 63 77 72 94 88 **   86 94 88 63 88 69 77 61 47 38 82
4280  93 93 90 75 96 96 96 ** 96 90 93 ** 90 93 ** 93 81 90 ** 78 96 93 81 96 81 90 87 ** 90 53 87 ** 96 90 90 96 87 93 93 98   96 ** 90 53 81 90 90 59 75 75 89
4283  91 73 87 62 ** 94 ** 94 91 98 91 80 80 83 83 92 58 80 80 67 98 80 80 98 42 89 75 96 92 55 75 87 96 76 75 91 64 92 96 96   96 ** 78 83 89 80 83 55 53 46 82
4301  67 60 78 57 96 92 ** ** 92 ** 89 78 85 82 85 78 57 92 50 35 89 82 89 ** 32 85 89 ** 85 53 71 82 96 75 75 92 82 92 92 **   92 92 ** 71 92 89 82 67 50 50 80
4440  75 75 78 66 86 78 83 87 79 86 81 70 64 77 64 74 44 59 63 51 87 82 68 90 54 77 66 94 89 45 74 74 85 63 62 67 63 74 81 85   71 83 72 52 71 55 63 41 44 36 70
4450  82 57 66 66 97 88 93 91 86 88 ** 77 73 86 84 88 66 66 71 64 91 68 80 93 53 75 77 91 80 48 97 91 95 77 84 91 73 77 86 86   86 86 88 62 66 75 82 62 28 48 78
4062  ** 78 82 53 ** ** 96 92 96 92 92 92 89 96 92 96 78 92 75 50 ** 96 89 92 89 85 82 96 96 67 92 92 89 82 82 89 85 92 82 92   92 96 96 82 92 78 92 64 85 89 88
4321  70 83 74 48 80 77 80 83 67 80 80 70 61 83 80 80 54 64 58 67 93 77 58 96 51 67 83 93 87 48 64 87 87 74 83 74 67 90 74 90   83 90 87 67 83 58 58 51 41 54 73
4322  62 52 70 60 86 78 92 88 80 90 88 64 74 78 74 78 56 66 68 41 92 74 76 94 45 68 54 98 72 50 66 80 78 78 72 78 72 74 78 84   74 78 70 62 72 70 72 56 54 50 72
4361  96 69 84 53 92 92 ** ** 92 96 ** 84 80 92 92 92 61 61 57 73 96 80 61 96 69 96 84 ** ** 61 88 88 88 80 65 76 80 80 84 88   88 88 73 80 84 76 88 73 30 53 81
4541  64 50 47 61 ** 97 ** 97 ** 97 91 82 73 97 85 97 79 82 85 79 94 85 82 97 55 85 88 ** 82 50 82 88 94 82 91 94 85 94 91 94   91 91 79 79 94 79 82 58 67 73 81
4543  70 63 54 56 90 79 90 86 90 88 88 68 43 88 84 81 54 63 59 56 97 68 72 97 34 81 86 95 86 54 79 86 95 77 70 79 61 79 86 93   93 90 84 68 86 79 77 52 47 36 75
DISD  79 69 75 62 93 87 93 92 88 91 90 77 73 86 82 85 61 73 69 59 93 80 74 95 52 82 77 96 87 54 78 85 90 75 76 82 72 84 85 91   86 90 82 67 82 73 77 56 51 51 78

4353  43 69 78 56 95 91 95 95 ** ** 95 86 86 91 56 84 47 82 52 39 91 73 82 95 39 56 82 95 91 47 86 86 95 91 86 95 91 95 86 **   ** 95 78 60 84 91 52 65 39 56 71
4061  95 71 61 71 90 95 95 90 ** ** ** 71 80 95 80 85 57 85 76 76 95 90 ** 95 42 85 90 95 ** 76 80 66 95 57 71 95 71 ** 95 **   ** ** ** 80 ** 80 90 80 52 52 84
4113  85 60 85 45 85 95 95 ** 95 ** 95 95 75 90 90 95 70 85 90 60 95 55 75 ** 35 85 85 95 95 65 95 95 95 85 70 80 95 95 85 **   90 90 70 80 70 80 85 60 30 35 81
4210  88 74 74 62 97 ** ** ** ** 97 97 83 86 93 97 ** 86 90 95 67 93 86 83 97 65 95 95 97 97 72 93 98 ** 88 90 97 93 97 93 97   95 95 88 90 81 81 97 79 74 72 89
4230  75 60 77 57 83 80 86 95 71 86 89 69 69 77 65 72 59 71 50 53 93 80 77 92 50 62 74 95 89 51 78 69 90 78 68 86 53 75 90 87   89 92 86 75 80 74 77 50 42 50 74
4271  89 78 71 65 97 97 97 97 97 97 97 94 81 94 96 86 81 ** 86 73 94 86 68 97 68 92 94 97 94 68 86 89 97 78 84 94 ** 97 92 97   ** 97 86 89 92 78 89 78 57 73 84
4360  78 65 81 63 81 63 81 81 86 84 84 73 76 71 60 81 44 71 68 52 92 60 76 86 28 73 63 92 84 36 86 71 81 57 63 73 52 71 76 81   89 81 84 63 73 60 63 42 31 23 67
4410  88 71 88 76 95 95 96 ** ** 98 91 85 86 91 95 91 63 86 63 61 86 86 68 98 58 86 83 98 96 60 90 91 91 76 80 91 90 93 93 96   90 93 88 78 91 78 80 71 56 48 84
4580  78 73 66 55 96 89 98 92 85 94 96 78 77 92 83 90 52 76 61 60 92 77 83 97 50 84 84 98 95 65 83 84 91 79 82 91 78 89 89 92   89 94 77 70 91 77 88 63 39 60 80
4610   0 **  0 ** ** ** ** ** ** ** ** ** ** ** ** **  0 ** ** ** ** **  0  0 ** ** ** ** **  0 ** ** ** ** ** **  0 ** ** **   ** ** ** ** ** ** ** ** ** ** 86
4620  68 72 77 64 97 89 96 96 97 96 94 76 76 88 86 88 60 80 85 57 89 72 77 96 56 73 81 ** 94 67 85 86 97 86 89 88 69 88 96 96   88 96 78 64 73 73 77 61 60 53 81
DISE  81 70 75 62 92 88 94 95 91 94 93 80 78 88 82 87 61 81 71 60 91 77 78 95 51 79 82 97 93 61 85 83 93 79 79 89 76 88 90 94   90 93 83 74 84 76 81 64 49 54 81

DISA  84 74 74 63 95 90 94 95 90 92 94 83 81 88 86 90 61 78 74 60 94 83 77 95 53 80 82 94 89 60 81 88 91 78 83 89 78 89 89 93   87 93 81 75 84 77 86 66 55 56 81
DISB  82 73 81 63 94 91 93 93 98 92 90 83 78 87 85 91 60 73 75 58 93 81 75 94 54 80 81 94 88 58 80 87 91 76 85 90 79 90 87 96   88 94 86 74 86 79 83 65 49 53 81
DISC  83 73 79 57 90 88 91 91 87 88 89 77 73 84 80 86 57 74 67 52 92 77 72 93 48 80 80 93 87 58 80 84 90 74 79 86 71 86 87 94   85 91 82 71 84 75 79 60 43 47 78
DISD  79 69 75 62 93 87 93 92 88 91 90 77 73 86 02 85 61 73 69 59 93 80 74 95 52 82 77 96 87 54 78 85 90 75 76 82 72 84 85 91   86 90 82 67 82 73 77 56 51 51 78
DISE  81 70 75 62 92 88 94 95 91 94 93 80 78 88 82 87 61 81 71 60 91 77 78 95 51 79 82 97 93 61 85 83 93 79 79 89 76 88 90 94   90 93 83 74 84 76 81 64 49 54 81
STOT  82 72 77 61 93 89 93 93 89 91 91 80 76 84 83 88 60 75 71 57 93 79 75 94 51 80 80 94 88 58 81 85 91 76 80 87 75 87 87 93   87 92 83 72 84 76 81 62 49 52 80
```

READING/LANGUAGE ARTS - LEVEL 4

INSTRUMENT AND POPULATION DESCRIPTION

This is a test comprised of fifty multiple choice items measuring selected objectives in the curriculum strands of Study Skills (10 items), Language Structure (10 items), Literal Comprehension (6 items), Interpretive Comprehension (9 items), Evaluative Comprehension (5 items), and Vocabulary (10 items). In addition there are Dictation and Writing portions that address the objectives in the curriculum strands of Writing/the Craft and Writing/Mechanics/Usage.

The test was organized according to the following domains with each domain containing ten items: Study Skills, Language Structure, Listening, Vocabulary, and Reading.

The population includes all students enrolled in grade 4 who took an on-level test and for whom valid answer sheets have been submitted.

SYSTEM STRENGTHS AND WEAKNESSES

Overall, students peformed fairly well on this test with a system-wide average score on the items of 72%. Generally, students appear to be mastering the objectives in Vocabulary and most of the objectives in Literal Comprehension, Study Skills, and Language Structure. In Literal Comprehension students had difficulty with an item addressing details in a passage (item #29). Within Study Skills students are having difficulty with alphabetical order and putting unorganized information into categories (item #'s 4 and 10). In Language Structure students do not appear to be mastering identifying tenses of sentences, prefixes, suffixes, and compound words (item #'s 11 and 19).

The most deficits as strands are found in the Interpretive and Evaluative Comprehension areas. In Interpretive Comprehension students are not mastering the objectives addressing the mainplot/subplot (item #'s 23 and 44). More than forty percent of the students did not correctly answer both items addressing fact/opinion in Evaluative Comprehension (item #'s 25 and 27).

BOSTON PUBLIC SCHOOLS

DEPARTMENT OF EDUCATIONAL TESTING

CURRICULUM REFERENCED FINAL

READING/LANGUAGE ARTS - LEVEL 4

1985 - 1986

STUDY SKILLS	1	J.3	Putting words into alph. order
	2	J.3	
	3	J.3	
	4	J.3	
	5	J.5	Using parts of book to find info.
	6	J.7	Using reference sources to locate info.
	7	J.4	Unorganized info. into categories
	8	J.4	
	9	J.4	
	10	J.4	
LANGUAGE STRUCTURE	11	K.6	Identifying tense of sentences
	12	K.6	
	13	K.6	
	14	K.4	Syllabication
	15	K.4	
	16	K.4	
	17	K.2	Identifying comp. wds., pref., & suff.
	18	K.2	
	19	K.2	
	20	K.2	
LISTENING	21	B.3	Details
	22	C.3	Inferring traits, feelings, & motives
	23	C.5	Main plot/subplot
	24	C.6	Writer's purpose
	25	D.3	Fact/opinion
	26	C.3	Inferring traits, feelings, & motives
	27	D.3	Fact/opinion
	28	B.3	Details
	29	B.3	
	30	D.1	Drawing comparisons w. own experience
VOCABULARY	31	E.2	Synonyms
	32	E.2	
	33	E.2	Antonyms
	34	E.2	
	35	E.3	Word meanings
	36	E.3	
	37	E.5	Multiple meanings
	38	E.5	
	39	E.4	Homonyms
	40	E.4	
READING	41	B.2	Main idea
	42	C.1	Fiction/non-fiction
	43	C.4	Inferring cause and effect relation.
	44	C.5	Main plot/subplot
	45	D.4	Fact/opinion
	46	B.2	Main idea
	47	B.3	Details
	48	C.4	Inferring cause and effect relation.
	49	C.4	
	50	D.2	Predicting further outcomes

```
 941 RD LEVL 4          TECR5005          11/07/86
PERCENTAGE OF CORRECT ANSWERS PER ITEM
NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY **

SCHL   1   2   3   4   5   6   7   8   9  10  11  12  13  14  15  16  17  18  19  20  21  22  23  24  25  26  27  28  29  30  31  32  33  34  35  36  37  38  39  40  41  42  43  44  45  46  47  48  49  50  TOTAL

4160  91  77  69  58  66  88  83  94  94  41  38  61  72  94  83  88  72  52  36  94  88  91  50  69  50  61  44  63  36  83  97  91  80  75  66  88  83  80  86  88  86  58  63  30  75  75  88  63  61  41  71
4170  **  93  93  53  80  **  86  86  93  40  53  73  66  86  93  **  40  46  46  86  **  **  53  93  46  86  66  40  53  73  93  **  66  80  60  80  86  80  80  80  93  53  73  26  93  93  93  **  80  80  70
4173  81  88  77  59  66  **  92  96  96  59  51  55  81  92  85  96  62  66  70  81  **  96  51  77  77  74  66  77  62  88  96  **  85  88  55  74  85  92  92  81  74  66  77  44  74  74  88  81  81  62  73
4220  **  85  80  60  55  90  90  85  95  45  65  60  75  85  75  80  70  45  35  80  95  75  55  55  45  75  35  80  35  50  90  90  65  65  55  90  80  80  75  80  80  75  75  40  65  80  80  70  85  30  71
4221  75  85  71  39  50  78  75  96  **  32  28  53  71  75  78  82  64  53  25  57  92  82  57  60  17  78  42  71  53  75  85  96  50  66  66  75  67  67  78  64  75  17  78  14  64  71  75  71  50  32  63
4570  94  72  78  56  51  94  81  97  97  51  43  67  64  72  72  91  86  48  45  86  97  86  37  64  43  83  70  75  54  91  **  97  67  70  64  81  62  70  83  86  83  59  62  43  89  78  86  67  72  64  72
4571  90  62  69  58  59  85  79  93  91  46  40  79  72  83  75  87  77  70  45  79  95  98  69  70  45  53  48  75  54  87  90  95  82  75  72  82  82  75  83  77  82  58  83  43  77  80  79  82  75  61  74
4010  93  66  66  63  93  96  93  **  96  63  70  70  63  93  96  96  66  70  53  93  **  **  70  73  70  66  73  86  70  93  **  96  93  80  76  **  90  90  83  86  93  70  86  33  86  **  **  76  86  63  82
4240  87  87  82  68  86  91  93  94  93  54  48  79  79  93  79  89  74  74  58  84  96  91  51  79  60  72  72  81  43  82  96  94  74  77  68  86  84  93  86  74  82  60  74  34  81  91  87  79  79  65  78
4241  87  91  75  58  41  95  91  87  91  54  50  62  66  91  91  95  75  66  37  91  **  91  54  79  58  83  79  70  54  95  91  **  54  70  37  91  83  95  79  66  87  50  70  16  75  95  95  79  79  62  75
4270  94  84  57  52  42  84  63  84  89  36  36  63  52  94  94  94  42  63  36  84  94  **  57  73  42  57  52  57  52  **  **  94  68  68  57  89  52  73  94  78  68  31  57  42  78  73  84  68  68  47  63
4310  **  95  83  33  79  91  87  91  95  41  79  58  79  87  91  **  70  70  54  91  95  **  62  75  54  58  50  33  41  83  95  **  79  75  70  83  95  91  95  83  70  62  83  25  87  83  83  62  79  79  76
4311  94  88  83  33  61  94  55  94  83  66  61  72  83  94  96  88  50  50  44  94  **  **  72  94  61  88  83  72  38  72  88  94  88  72  83  88  66  83  83  88  83  44  77  61  83  83  **  72  83  72  77
4370  76  64  72  20  52  76  68  72  92  40  32  56  72  72  76  84  32  36  44  80  **  96  52  76  32  60  40  60  36  80  80  92  64  56  48  80  88  68  88  68  68  24  68  36  64  76  92  56  72  44  65
4371  96  **  75  71  78  93  87  93  **  59  62  65  84  90  90  93  65  59  34  96  93  96  53  81  68  59  68  90  53  87  96  96  **  68  56  87  78  81  87  78  87  59  78  53  81  84  84  87  68  37  79
4430  88  76  88  76  88  92  92  92  **  84  72  76  92  88  88  92  80  80  80  **  **  **  72  88  48  84  56  68  56  88  **  96  84  80  76  88  84  96  88  92  80  84  88  36  84  76  92  88  84  76  83
DISA  90  83  75  56  66  90  83  92  94  51  50  67  73  87  83  90  67  61  47  85  96  93  57  74  51  69  59  71  50  84  94  95  76  72  63  85  80  82  85  79  81  55  75  36  78  82  87  75  75  63  74

4030  91  70  54  37  37  91  91  91  87  66  25  83  83  83  87  91  79  66  45  87  **  91  75  62  41  91  54  79  45  83  95  **  91  83  70  91  75  91  79  83  95  66  79  29  75  83  83  58  70  54  74
4031  87  87  56  25  50  81  43  68  81  37  31  68  81  **  75  87  81  62  25  93  **  93  56  75  43  63  62  68  25  81  **  **  81  62  62  81  75  62  87  68  68  25  62  25  81  75  75  50  50  17  66
4081  **  86  89  55  72  93  75  89  89  41  34  68  62  **  93  86  72  62  37  79  96  **  48  75  24  58  58  68  20  86  89  86  86  62  37  79  68  72  89  79  82  62  48  27  65  79  79  48  55  58  67
4082  92  76  64  44  36  88  72  88  88  36  44  68  52  88  76  88  52  40  72  80  88  96  56  80  52  72  48  72  44  84  92  88  52  64  48  80  68  80  64  72  72  44  76  32  64  84  92  68  76  44  67
4290  93  87  81  53  57  93  81  93  91  46  34  61  63  95  87  85  75  65  40  81  95  **  67  75  46  69  61  83  40  75  95  97  81  77  63  89  83  79  77  73  79  69  79  32  81  77  87  79  71  57  76
4560  90  85  76  57  54  92  67  90  93  46  60  70  73  95  81  96  76  60  40  93  96  95  54  76  34  78  53  65  40  87  95  **  73  57  70  89  76  84  76  73  79  53  78  34  70  79  87  70  64  42  72
4561  **  83  66  55  44  88  72  88  83  55  72  83  61  83  **  94  72  55  27  83  94  94  77  77  27  44  38  38  33  94  94  94  83  50  55  94  83  77  66  77  83  33  83  33  72  88  88  72  66  38  70
4690  91  92  72  45  50  90  85  95  94  50  28  62  67  74  79  87  66  55  33  93  93  91  50  81  51  73  54  63  38  78  96  **  68  61  48  79  74  73  79  84  73  42  67  38  65  75  75  72  57  46  61
4070  96  96  83  66  71  92  92  92  81  92  67  77  84  88  84  79  88  75  84  88  94  86  84  98  86  92  86  84  73  86  86  94  62  64  75  90  84  79  86  77  63  49  75  63  67  73  71  73  75  41  31
4080  88  66  55  55  50  77  77  88  77  50  55  83  83  83  83  83  66  61  55  72  88  83  38  66  77  55  44  88  38  77  88  88  77  72  50  88  77  77  77  94  66  50  94  27  66  77  83  66  66  72  70
4151  98  93  82  56  52  88  77  94  93  62  29  57  53  81  78  88  66  66  45  84  93  92  54  73  54  76  50  50  36  81  94  92  60  49  74  82  85  81  88  81  72  54  52  33  62  81  85  60  60  57  73
4190  81  76  62  53  59  89  75  79  89  37  46  56  65  82  82  90  53  50  25  68  93  92  57  71  43  60  42  68  35  81  89  89  65  48  59  84  75  75  73  62  67  51  73  35  67  76  67  65  56  62  66
4192  94  81  71  76  52  92  97  97  94  44  63  84  76  89  78  86  84  71  60  81  97  94  65  94  84  73  73  63  42  78  94  94  76  73  52  97  92  89  86  65  73  52  89  18  84  81  69  76  78  73  77
4200  84  81  71  43  43  93  84  90  90  37  40  68  43  84  84  87  75  56  43  90  **  **  56  68  46  78  75  53  43  84  96  93  62  62  53  90  81  75  81  68  90  90  78  63  84  81  93  84  87  78  73
4201  96  96  85  85  96  92  92  96  92  46  92  89  96  82  92  96  85  71  78  96  96  96  78  71  67  57  50  57  50  78  96  96  67  60  53  96  75  75  92  71  64  75  57  28  67  71  78  64  67  53  77
4670  86  78  69  43  56  82  78  91  **  39  39  56  52  60  82  73  52  56  39  86  **  **  69  78  78  60  73  95  43  95  **  **  60  60  65  86  82  82  78  73  73  39  69  39  65  86  82  82  78  52  71
DISB  92  85  73  54  56  90  80  90  90  51  46  68  67  85  83  88  71  61  46  85  95  93  61  77  53  70  57  67  41  82  93  94  70  61  60  86  79  78  80  75  76  54  71  33  70  78  81  69  66  57  72

4051  83  90  81  74  55  93  81  79  88  55  53  62  72  88  79  86  55  53  67  74  88  95  55  76  67  60  53  58  53  74  90  95  74  79  62  81  76  69  86  76  74  53  69  37  67  69  79  83  67  60  72
4130  92  91  73  46  55  89  82  91  89  48  39  80  69  89  82  91  76  69  46  83  **  96  55  80  62  66  62  89  41  83  98  96  73  73  60  94  78  73  71  69  73  41  76  32  76  82  89  71  66  50  73
4131  95  **  **  75  90  **  **  **  **  95  90  95  95  95  95  **  **  95  95  95  **  **  **  **  **  95  90  **  85  95  95  **  **  **  95  **  **  95  **  90  95  90  95  95  95  **  **  95  95  95  96
4140  **  86  70  43  33  93  80  90  93  20  40  60  53  90  86  90  50  53  53  86  86  90  73  73  40  50  36  70  26  70  96  96  60  56  56  90  86  90  80  83  76  60  63  40  63  76  83  66  73  53  63
4150  95  85  71  42  57  80  71  92  88  42  42  61  66  85  71  80  61  50  42  76  95  95  54  64  23  61  35  47  42  64  88  92  54  42  71  85  64  78  83  73  76  42  61  23  64  76  76  61  69  45  63
4250  87  83  72  53  55  91  81  90  83  55  66  75  73  85  83  92  47  56  37  80  94  91  51  72  40  75  54  71  48  73  94  93  73  60  63  76  73  72  75  67  71  45  63  45  70  70  85  63  63  61  67
4340  91  83  58  43  61  80  83  80  83  47  29  53  67  74  84  89  69  58  62  69  92  89  43  67  50  55  43  56  32  71  87  92  69  61  37  76  67  74  80  70  65  29  50  30  57  78  80  62  46  47  64
4350  90  84  74  50  62  81  74  96  94  58  23  63  69  83  81  87  69  58  41  87  98  95  54  68  60  72  55  70  43  74  91  89  75  71  55  75  81  78  84  77  78  50  70  22  68  78  91  77  69  63  71
4390  96  **  76  65  80  80  76  92  96  65  62  34  61  88  88  88  46  65  53  92  96  96  73  80  61  69  46  84  38  76  96  **  84  65  73  88  84  76  80  92  84  50  80  26  80  80  92  65  88  55  75
4391  89  84  68  42  36  84  73  84  89  21  57  63  57  **  84  84  73  73  31  84  **  94  42  73  57  73  57  84  42  78  89  89  73  73  42  94  78  78  73  84  84  68  78  21  78  63  84  57  52  57  71
4400  95  81  75  67  67  98  91  92  94  62  50  74  77  90  94  94  87  81  45  90  97  98  65  88  75  62  61  81  28  84  88  98  78  70  61  80  82  81  85  78  81  50  74  27  87  81  88  77  78  65  77
4550  **  76  63  60  68  96  72  **  96  44  52  52  64  96  88  88  92  72  88  96  **  96  84  72  48  72  48  84  32  72  96  96  68  48  60  92  84  72  84  84  64  40  80  12  56  76  92  56  68  56  73
4022  **  95  75  33  50  79  66  75  87  41  33  62  62  79  83  87  83  70  41  87  91  87  41  58  29  58  33  50  45  66  95  91  66  45  54  83  75  75  79  54  75  50  62  16  62  83  83  54  45  45  65
```

941 RD LEVL 4   TECK5005   11/07/86
PERCENTAGE OF CORRECT ANSWERS PER ITEM
NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY **

SCHL	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	TOTAL
4052	**	94	66	33	55	94	**	94	94	55	33	55	66	**	**	**	83	55	55	94	83	**	77	63	5	61	50	68	44	72	68	94	72	61	55	77	83	83	88	77	55	55	72	22	61	88	94	77	72	83	73
4100	97	85	79	53	63	86	84	89	92	58	53	78	69	80	89	92	71	69	42	83	97	98	70	85	51	64	58	83	55	85	96	94	73	79	59	85	85	79	77	76	82	51	72	23	79	79	94	65	78	59	75
4120	**	90	85	45	85	95	85	95	**	45	55	70	75	95	**	90	90	90	75	95	**	95	90	85	90	85	80	95	50	95	90	**	95	80	50	90	90	90	95	75	85	40	90	40	65	80	90	85	85	60	82
4121	**	90	45	54	81	**	**	**	**	81	63	63	81	90	**	**	72	90	18	81	**	**	27	72	45	54	54	72	27	54	**	**	81	54	81	90	72	90	72	81	54	63	90	18	90	81	**	72	63	72	75
4530	96	66	70	51	55	77	**	92	96	55	44	81	74	85	96	**	55	44	37	85	**	**	51	62	18	44	55	70	40	88	96	96	66	48	59	77	74	88	92	92	81	55	81	14	74	88	85	62	74	48	71
4531	**	81	90	36	36	72	81	**	**	45	63	63	63	**	81	**	90	90	63	**	**	**	72	81	81	54	54	45	45	81	81	90	72	36	72	90	81	90	81	72	90	72	81	18	63	81	90	72	90	63	75
4590	84	84	64	56	80	**	92	**	**	60	76	80	76	**	96	92	84	80	40	92	**	92	72	**	60	84	72	76	32	76	**	**	84	68	60	96	72	92	72	84	80	52	80	32	72	76	84	72	72	56	71
4592	**	**	87	75	62	**	87	87	**	37	37	62	50	75	62	**	50	75	75	**	**	**	.62	75	75	37	50	62	50	75	**	**	87	62	37	87	50	75	**	75	62	62	50	50	75	87	87	75	62	50	74
4630	91	85	74	51	56	91	81	95	91	63	46	62	53	80	82	90	74	64	45	84	93	91	53	59	45	58	39	73	40	76	91	87	63	59	57	78	78	80	81	84	73	47	80	28	67	85	85	68	68	48	70
DISC	93	85	73	52	61	88	82	90	91	54	45	67	68	86	85	90	70	65	49	84	95	94	59	74	52	65	52	73	42	77	92	94	72	65	58	83	78	79	81	76	75	48	71	30	71	79	87	69	68	57	72
4260	85	91	67	47	61	85	82	85	79	52	50	64	73	79	79	88	79	55	44	79	**	97	41	79	32	70	44	76	47	82	94	97	79	67	55	91	91	88	73	73	85	55	50	26	70	79	76	61	61	38	70
4280	95	84	69	58	76	82	80	82	91	67	50	69	65	86	82	91	63	52	32	86	93	97	80	67	45	76	63	71	43	80	89	93	80	73	80	84	67	76	80	69	76	47	71	23	71	80	78	58	63	41	71
4283	87	82	78	52	67	87	87	91	92	60	40	68	62	90	90	97	81	65	40	87	95	94	38	80	54	57	62	77	50	78	94	95	70	78	55	84	74	92	82	77	82	42	78	24	80	78	85	62	70	64	73
4381	95	95	90	55	95	**	**	95	95	90	55	80	75	**	**	**	90	85	95	95	**	**	65	80	75	55	55	55	30	80	95	**	75	95	85	80	95	80	90	85	90	45	70	65	85	**	95	85	90	90	83
4640	91	85	57	38	33	86	76	91	91	39	57	55	70	89	76	85	60	61	35	76	94	91	51	63	35	55	45	66	38	70	85	94	69	57	54	72	72	64	75	64	67	42	61	36	67	64	86	69	70	61	66
4650	94	81	70	57	51	93	79	91	93	60	42	65	68	78	78	83	74	64	42	77	97	91	51	80	50	71	65	71	52	79	85	91	78	65	65	74	71	72	85	75	78	43	67	28	74	67	85	74	64	68	71
4062	96	81	75	84	87	90	84	90	90	75	59	78	75	84	87	90	81	75	71	96	**	93	59	75	71	75	68	78	56	84	90	96	84	78	59	93	93	84	84	93	81	68	75	37	87	78	87	78	78	75	83
4321	91	83	70	29	79	75	75	91	95	50	54	70	83	95	87	**	62	62	45	83	95	87	62	79	41	45	29	37	29	79	87	**	83	50	50	79	75	70	95	83	62	33	75	29	75	79	**	54	79	50	69
4322	89	77	62	51	43	81	68	89	84	43	55	60	72	72	72	84	43	53	51	72	91	89	74	70	48	48	58	70	32	74	87	93	63	62	62	72	86	68	75	63	70	44	65	20	62	79	82	68	68	55	66
4361	**	**	81	50	56	**	87	93	93	75	68	81	75	93	**	**	56	68	56	93	**	**	63	87	81	93	87	93	62	81	87	**	93	93	75	93	81	**	87	87	87	68	93	18	87	93	93	87	87	81	85
4541	77	82	77	47	65	75	85	85	92	50	42	67	75	95	80	92	70	60	45	77	**	**	80	82	55	42	59	85	50	75	90	92	45	50	65	82	75	82	85	92	72	42	52	37	67	82	82	52	52	67	70
4543	94	89	73	55	71	92	86	89	86	44	55	65	63	84	92	89	86	63	47	86	97	94	60	68	23	55	44	86	31	68	94	86	68	68	57	78	84	92	81	78	73	42	76	21	71	76	89	81	65	68	72
DISD	90	84	70	52	60	86	81	89	90	56	50	66	70	85	82	90	69	62	46	82	96	93	58	75	48	61	56	72	44	77	89	94	72	67	62	80	78	78	81	76	76	46	68	29	73	76	85	68	68	62	71
4053	76	90	71	47	80	85	90	85	95	42	52	57	61	57	95	85	57	57	47	80	**	95	66	90	57	66	52	76	47	66	95	95	61	80	85	76	76	80	71	80	80	42	71	19	76	95	85	85	80	57	72
4061	95	90	70	75	70	97	90	92	97	65	70	90	85	92	90	97	90	82	68	92	**	**	82	92	92	78	80	87	48	87	92	**	78	82	82	95	78	92	97	95	92	87	87	51	85	95	92	90	70	75	85
4113	96	84	78	63	69	**	93	**	96	72	42	81	84	87	90	**	66	54	45	75	**	**	72	72	33	69	54	78	39	81	93	96	78	81	72	93	78	90	90	69	90	51	78	36	81	84	84	75	78	69	77
4210	90	86	72	52	63	84	95	97	97	68	56	81	84	93	95	95	79	70	56	88	**	**	59	84	40	70	56	75	43	84	97	97	75	72	56	97	81	88	88	88	72	70	68	43	86	88	86	84	72	61	78
4230	87	90	74	53	67	89	77	91	90	46	59	68	71	81	91	92	63	61	53	83	94	95	53	77	44	73	63	69	40	89	86	97	78	72	73	44	80	70	86	79	77	49	75	40	78	85	89	73	80	59	74
4271	92	82	73	48	68	97	82	87	92	60	50	80	80	97	95	**	78	58	46	90	**	**	65	80	60	65	60	92	39	73	95	97	82	75	70	97	80	92	85	80	78	56	75	39	80	82	87	85	70	51	77
4360	51	51	40	66	33	62	48	88	62	22	33	44	29	59	40	48	48	37	29	51	62	55	22	51	44	29	25	81	22	40	62	59	40	14	33	81	48	40	92	51	40	22	44	11	33	37	48	33	37	22	44
4410	96	82	68	50	52	90	86	96	98	62	74	86	74	94	90	96	84	84	74	94	98	**	78	86	66	68	58	66	47	84	**	**	84	78	56	98	76	84	84	90	84	37	76	33	76	92	94	90	74	80	77
4580	91	89	74	46	50	93	82	93	89	48	51	66	70	89	88	86	72	65	49	80	97	96	55	81	47	69	56	77	53	81	93	93	86	67	68	79	69	83	83	74	74	56	65	43	70	78	83	65	67	64	73
4610	**	**	**	0	0	0	**	0	**	0	**	**	**	**	**	**	0	0	**	**	**	0	**	**	**	**	**	0	**	0	**	**	0	**	0	0	**	0	**	**	0	0	0	0	**	0	**	**	**	**	62
4620	93	93	80	44	60	88	74	93	85	45	46	78	77	93	89	90	62	58	40	82	**	97	50	73	42	48	57	66	33	82	98	96	72	64	50	81	74	74	89	78	76	45	74	32	64	80	85	80	73	64	71
DISE	89	86	72	52	61	89	81	92	90	52	55	73	73	87	88	90	70	64	51	83	96	95	59	79	51	65	59	75	42	81	92	95	76	70	65	86	75	79	87	79	77	52	72	37	74	82	85	76	72	62	74
DISA	90	83	75	56	66	90	83	92	94	51	50	67	73	87	83	90	67	61	47	85	96	93	57	74	51	69	59	71	50	84	94	95	76	72	63	85	80	82	85	79	81	55	75	36	78	82	87	75	75	63	74
DISB	92	85	73	54	56	90	80	90	90	51	46	68	67	85	83	88	71	61	46	85	95	93	61	77	53	70	57	67	41	82	93	94	70	61	60	86	79	78	80	75	76	54	71	33	70	78	81	69	66	57	72
DISC	93	85	73	52	61	88	82	90	91	54	45	67	68	86	85	90	70	65	49	84	95	94	59	74	52	65	52	73	42	77	92	94	72	65	58	83	78	79	81	76	75	48	71	30	71	79	87	69	68	57	72
DISD	90	84	70	52	60	86	81	89	90	56	50	66	70	85	82	90	69	62	46	82	96	93	58	75	48	61	56	72	44	77	89	94	72	67	62	80	78	78	81	76	76	46	68	29	73	76	85	68	68	62	71
DISE	89	86	72	52	61	89	81	92	90	52	55	73	73	87	88	90	70	64	51	83	96	95	59	79	51	65	59	75	42	81	92	95	76	70	65	86	75	79	87	79	77	52	72	37	74	82	85	76	72	62	74
STOT	91	85	73	53	60	89	81	91	91	53	48	68	70	86	85	90	69	63	48	84	95	94	59	76	51	66	56	72	43	80	92	94	73	66	61	84	78	79	82	77	77	51	71	33	73	79	85	71	69	60	72

READING/LANGUAGE ARTS - LEVEL 5

INSTRUMENT AND POPULATION DESCRIPTION

This is a test comprised of sixty-five multiple choice items measuring selected objectives in the curriculum strands of Study Skills (10 items), Language Structure (10 items), Literal Comprehension (12 items), Interpretive Comprehension (14 items), Evaluative Comprehension (9 items), and Vocabulary (10 items). In addition there are Dictation and Writing portions that address the objectives in the curriculum strands of Writing/the Craft and Writing/Mechanics/Usage. The test serves as both the final examination and the State Basic Skills Test for grade 5 students.

The test was organized according to the following domains: Study Skills, Language Structure, Reading, Listening, and Vocabulary. Reading contains twenty-five items and the other domains contain ten items each.

The population includes all students enrolled in grade 5 who took an on-level test and for whom valid answer sheets were submitted.

SYSTEM STRENGTHS AND WEAKNESSES

Overall, students performed only fairly well on this test with a system-wide average score on the items of 67%. Generally, students appear to be mastering the objectives in Evaluative Comprehension and most of the items in Literal Comprehension and Study Skills. Within these latter two domains there are isolated objectives which are not being mastered by more than forty percent of the students. Within Literal Comprehension students had difficulty with a main idea item (# 54) and within Interpretive Comprehension students had difficulty with key points in a passage (item # 21) and inferring traits and feelings of characters (item # 22).

The most deficits as strands are found in the areas of Vocabulary and Language Structure. There are two items in Vocabulary and three items in Language Structure which fewer than fifty percent of the students answered correctly. In the first domain students had difficulty with synonyms and antonyms (item #'s 56 and 58) and in the second domain students had difficulty with the items that tapped types of sentences, parts of speech, complete subject, and complete predicate (item #'s 14, 15, and 18).

BOSTON PUBLIC SCHOOLS

DEPARTMENT OF EDUCATIONAL TESTING

CURRICULUM REFERENCED FINAL READING/LANGUAGE ARTS - LEVEL 5

1985 - 1986

STUDY SKILLS	1	J.1	Following directions
	2	J.1	
	3	J.1	
	4	J.3	Putting words into alph. order
	5	J.3	
	6	J.3	
	7	J.7	Using reference sources to locate info.
	8	J.7	
	9	J.5	Using parts of book to find info.
	10	J.5	
LANGUAGE STRUCTURE	11	K.1	Types of sentences
	12	K.1	
	13	K.1	
	14	K.1	
	15	K.3	Parts of speech
	16	K.3	
	17	K.3	
	18	K.5	Complete subj. & complete predicate
	19	K.5	
	20	K.5	
READING	21	C.2	Key points
	22	C.3	Inferring traits, feelings, & motives
	23	C.4	Inferring cause and effect relation.
	24	C.6	Writer's purpose
	25	D.4	Point of view
	26	D.1	Drawing comparisons w. own experience
	27	D.2	Predicting further outcome
	28	C.1	Fiction/non-fiction
	29	C.6	Writer's purpose
	30	D.2	Predicting further outcome
	31	B.2	Main idea
	32	B.3	Identifying details
	33	C.1	Fiction/non-fiction
	34	C.4	Inferring cause and effect relation.
	35	D.1	Drawing comparisons w. own experience
	36	B.3	Details
	37	B.3	
	38	C.1	Fiction/non-fiction
	39	B.3	Details
	40	C.5	Main plot/subplot
	41	B.2	Main idea
	42	B.3	Details
	43	D.2	Predicting further outcome
	44	D.3	Fact/opinion
	45	D.4	Point of view

	Item	Objective	Skill
LISTENING	46	B.2	Main idea
	47	B.3	Details
	48	B.4	Identifying the sequence
	49	C.3	Inferring traits, feelings, & motives
	50	C.3	
	51	C.4	Inferring casue and effect relation.
	52	C.3	Inferring traits, feelings, & motives
	53	D.2	Predicting further outcome
	54	B.2	Main idea
	55	B.2	
VOCABULARY	56	E.2	Synonyms
	57	E.2	
	58	E.2	Antonyms
	59	E.2	
	60	E.3	Word meanings
	61	E.3	
	62	E.5	Multiple meanings
	63	E.5	
	64	E.4	Homonyms
	65	E.4	

```
 951 RD LEVL 5          TECR5305              11/07/86
PERCENTAGE OF CORRECT ANSWERS PER ITEM
NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY **

SCHL     1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40

 4160   58 64 61 58 64 82 66 76 56 43 71 69 76 53 69 61 69 82 58 66 35 35 38 53 64 53 51 61 48 58 46 69 66 79 64 82 48 64 82 58
 4170   64 88 82 58 94 70 64 70 58 23 70 41 76 35 17 58 47 17 35 41 29 17 47 41 82 70 64 76 47 76 52 88 23 64 76 94 29 76 58 47
 4173   95 ** 80 55 90 75 80 75 60 25 70 80 65 55 80 85 70 50 80 80 50 50 60 60 80 75 50 95 70 50 75 ** 60 ** 80 85 70 75 75 55
 4220   68 87 87 75 87 56 62 68 75 31 56 43 75 31 43 62 56 31 43 56 18 25 31 43 50 75 18 87 43 62 87 93 50 56 81 87 50 87 68 81
 4221   70 95 90 70 85 75 60 80 75 55 85 70 85 50 35 80 55 55 40 50 65 70 70 80 80 90 75 90 75 60 75 90 55 85 85 85 80 90 85 80
 4570   82 87 75 73 87 82 80 80 65 43 73 48 68 56 43 51 51 31 51 46 36 41 51 51 68 70 58 82 51 70 78 95 46 65 90 97 75 78 85 60
 4571   79 95 81 72 85 85 83 81 72 54 58 52 83 45 56 87 81 56 72 75 45 54 66 75 87 85 68 93 93 64 85 91 66 89 91 97 72 85 85 77
 4010   85 85 71 57 89 60 64 53 78 35 46 21 71 10  7 57 46 28 42 42 53 39 67 64 67 64 50 89 57 75 64 96 35 82 71 96 57 64 64 78
 4240   82 88 92 84 92 78 80 84 76 47 58 39 80 47 33 66 60 23 60 47 45 35 50 68 82 70 72 88 72 68 66 90 56 88 72 ** 58 82 86 82
 4241   62 ** 87 50 ** ** ** 75 50 50 50 75 87 62 25 37 25 75 62 75 37 12 75 50 50 87 75 87 62 ** ** 75 ** 75 87 ** 75 ** 87 62
 4270   26 73 63 42 94 89 94 94 89 42 73 78 68 36 36 ** 78 84 73 73 89 52 57 68 73 73 57 78 84 57 78 73 73 73 63 94 68 89 73 52
 4310   75 ** 75 87 ** ** 87 ** 75 75 87 75 87 87 87 75 50 87 75 75 75 87 62 50 ** ** 62 87 87 ** 75 ** 87 ** 87 ** 75 75 ** 87
 4311   85 90 80 47 76 57 66 71 76 42 66 66 76 57 28 61 38 19 28 19 47 52 66 52 80 76 71 90 57 57 76 85 38 90 71 95 38 71 85 52
 4370   56 87 93 50 ** 87 87 75 93 62 81 67 93 62 43 62 31 18 12 43 50 68 62 56 75 75  6 ** 87 68 87 87 87 56 75 ** 37 81 93 68
 4371   95 90 95 90 90 90 80 90 70 50 75 70 90 60 40 65 40 55 60 90 50 45 55 80 95 85 80 95 70 75 75 ** 55 90 70 ** 75 95 80 65
 4430   88 ** ** ** 88 ** 88 88 77 55 88 66 88 55 66 77 55 55 77 66 ** ** ** 88 88 ** 77 ** ** 88 ** ** 88 ** 77 ** 77 88 ** 88
 DISA   75 87 80 67 86 79 76 78 71 45 67 56 79 48 43 68 57 45 55 57 48 45 57 62 76 74 59 86 67 67 73 84 58 81 77 94 61 79 81 68

 4030   86 93 93 53 73 53 73 66 53 40 66 60 66 26 73 80 66 40 33 20 40 40 60 73 86 80 66 93 86 66 80 86 60 80 93 ** 60 73 80 60
 4031   84 84 92 61 84 61 69 76 69 53 ** 92 ** 61 76 ** 69 53 76 84 53 30 53 69 76 84 76 92 92 ** 69 ** 61 84 69 92 61 76 84 69
 4081   84 92 84 57 80 88 ** 92 88 80 96 96 96 88 69 92 92 ** ** 96 46 38 57 53 80 65 53 80 65 53 73 80 30 80 84 92 53 69 69 69
 4082   ** 93 68 ** 68 81 18 56 ** 12 81 50 68 37 25 56 50  0 56 37 62 50 93 37 75 56 37 87 50 37 56 68 31 75 68 93 31 56 43 75
 4290   78 98 80 76 85 78 82 62 67 44 80 73 78 51 42 85 57 48 26 62 41 28 37 67 78 89 66 87 73 75 75 89 73 87 89 98 51 80 78 75
 4560   97 95 80 53 91 75 95 86 71 40 82 86 82 60 40 86 68 53 48 40 57 37 68 77 88 82 60 82 60 73 64 91 48 77 80 ** 66 62 84 55
 4561   60 90 65 65 95 65 75 65 65 40 85 75 80 35 35 65 25 25 35 45 60 25 45 60 65 85 35 85 60 40 65 70 50 60 75 95 55 80 60 60
 4690   56 83 78 60 84 63 83 72 59 36 62 24 75 48 37 66 54 62 66 74 46 46 48 68 74 75 34 90 68 62 54 86 53 74 66 90 54 84 72 72
 4070   79 94 88 55 82 85 76 76 64 38 58 61 73 50 44 70 61 35 38 50 47 64 64 73 88 79 70 88 58 67 55 70 41 76 79 85 55 73 64 73
 4080   72 72 86 68 59 77 72 77 59 50 40 31 50  4 63 72 59 63  4 63 40 40 63 72 86 86 81 95 77 54 72 72 54 95 81 86 77 68 86 86
 4151   76 90 83 76 94 75 76 63 70 38 79 65 86 52 38 77 68 29 58 63 59 45 56 75 93 87 69 95 73 76 76 91 55 81 75 ** 66 86 80 75
 4190   57 87 71 66 89 76 75 75 64 35 75 58 66 46 48 78 67 67 87 71 37 33 66 67 73 75 55 91 80 69 62 82 58 82 75 87 50 73 76 69
 4192   81 96 85 55 81 77 85 74 62 22 59 59 38 48 37 74 44 51 81 70 37 55 55 62 85 74 59 88 70 66 77 96 62 77 77 85 59 66 62 70
 4200   ** ** 87 68 ** 75 81 87 68 50 68 56 81 56 75 81 93 75 37 62 43 37 50 63 93 75 81 ** ** 68 62 93 93 75 87 93 93 93 ** 75
 4201   86 95 ** 82 82 82 91 78 69 47 73 56 60 30 60 69 56 17 56 65 73 78 73 60 73 73 43 ** 52 65 73 82 47 78 78 95 56 69 91 65
 4670   84 ** 84 68 94 78 89 52 52 21 73 63 84 36 21 73 52 52 63 57 47 47 42 68 89 66 84 ** 84 68 78 ** 68 89 78 ** 73 84 ** 78
 DISB   76 91 81 66 85 75 80 72 67 40 73 61 77 48 45 76 61 49 56 62 49 43 57 68 81 79 59 90 70 67 67 85 55 80 77 93 59 76 76 70

 4051   52 ** ** 88 ** ** ** 94 76  5 76 82 82 76 47 70 70 70 94 58 82 58 29 82 76 ** 82 ** 82 82 82 ** 76 88 ** ** 82 82 94 58
 4130   68 93 93 75 90 87 43 75 75 43 62 59 75 40 50 68 62 50 65 75 50 43 50 65 87 84 68 84 75 68 78 93 53 81 78 93 56 68 93 81
 4131   80 95 85 55 95 90 65 55 70 35 35 15 35 15 30 55 45  5 25 25 40 55 60 75 85 75 55 90 70 65 85 90 60 75 90 95 65 65 80 75
 4140   76 84 73 57 88 69 53 30 61 11 73 50 84 42 34 73 57 34 61 65 46 30 42 34 57 65 50 80 53 57 61 80 50 65 61 84 46 65 69 73
 4150   84 87 87 59 84 78 90 84 56 46 78 71 93 59 34 84 37 59 65 65 46 46 62 65 96 78 75 93 53 71 62 90 40 90 71 ** 75 87 90 78
 4250   90 84 78 50 84 88 74 64 70 38 82 68 82 46 66 68 62 62 44 78 74 54 64 60 78 90 70 86 62 66 76 78 72 72 76 90 74 70 84 70
 4340   78 79 65 49 78 67 53 48 62 29 39 20 43 30 26 54 29 18 50 25 34 34 45 60 75 74 48 81 62 58 62 77 30 59 73 88 44 58 75 59
 4350   74 89 81 63 88 67 57 66 71 49 50 44 63 44 41 72 44 20 47 50 45 31 50 57 66 75 57 83 65 65 81 78 49 66 77 81 66 67 71 72
 4390   73 73 60 60 91 78 69 86 65 43 65 69 86 47 17 60 43 30 60 65 52 30 65 65 91 69 65 ** 73 82 56 95 56 91 69 73 56 56 65 73
 4391   80 ** 93 86 ** 80 73 86 93 53 66 66 80 46 60 73 66 33 66 26 60 20 73 80 93 86 53 93 73 80 80 93 66 86 73 ** 73 66 93 60
 4400   64 96 63 65 84 81 77 66 71 45 64 61 83 52 57 81 61 47 57 57 58 31 53 82 85 85 66 90 84 74 73 91 42 82 81 94 61 71 84 75
 4550   74 92 74 66 92 85 66 92 74 77 77 77 70 51 70 66 66 74  3 62 29 29 51 74 85 85 37 88 81 51 59 ** 33 85 81 96 74 66 81 55
 4022   84 84 76 61 84 61 53 53 53 23 15 23 38 30 15 53 61 15 46 38 30 53 61 46 69 76 53 92 38 46 61 ** 38 61 84 92 61 61 61 46
 951 RD LEVL 5          TECR5005             11/07/66
PERCENTAGE OF CORRECT ANSWERS PER ITEM
NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY **

SCHL    41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 TOTAL

 4160   58 71 59 58 66 71 92 56 61 69 25 46 35 23 58 33 66 33 61 36 41 41 66 64 58 59
 4170   47 47 41 52 52 64 88 64 94 94 52 58 52 17 58 47 58 35 41 52 64 52 70 41 94 57
 4173   70 70 60 70 80 85 ** 85 90 85 45 55 35 35 70 60 75 45 70 40 50 45 65 55 85 69
 4220   56 62 50 75 43 81 87 93 ** 93 68 62 81 37 81 25 93 37 50 62 68 81 ** 75 93 64
 4221   80 60 70 80 70 75 80 80 95 65 35 65 45 35 75 55 80 25 65 60 40 60 70 30 90 69
 4570   73 56 63 70 80 75 85 60 85 80 39 43 46 21 75 43 85 31 58 53 41 43 82 46 90 64
 4571   77 68 87 81 83 81 95 87 93 89 47 58 64 58 79 22 91 64 72 72 79 81 97 79 93 76
 4010   57 53 64 71 57 85 89 46 ** 92 60 64 46 28 75 32 89 39 57 46 64 85 89 71 96 62
 4240   76 62 64 66 62 80 94 70 92 86 60 76 47 27 82 35 90 37 64 56 60 70 88 74 84 68
 4241   62 87 37 62 87 87 87 75 ** 87 62 87 ** 37 62 87 87 37 87 75 87 62 75 50 87 72
 4270   52 36 57 73 52 68 84 47 ** 89 84 63 78 63 57 84 84 52 31 73 68 78 89 73 94 70
 4310   87 87 87 87 75 87 87 87 ** ** 50 50 87 50 75 87 87 75 75 ** 87 ** ** 87 ** 84
 4311   61 52 71 57 52 85 95 52 95 80 66 61 76 23 71 38 80 23 23 57 38 57 76 52 85 62
 4370   50 87 50 43 50 62 87 81 93 93 37 56 37 31 68 93 ** 93 ** 93 ** ** ** ** ** 71
 4371   70 80 90 85 65 90 ** 70 ** 90 35 60 70 55 70 25 95 25 65 65 75 80 85 70 ** 74
 4430   88 88 66 66 55 ** ** ** ** ** ** 88 66 55 ** 88 ** ** 66 88 ** ** 88 88 ** 87
 DISA   67 64 65 69 66 79 91 69 91 85 50 60 55 35 72 44 84 43 61 60 61 67 83 65 88 68

 4030   80 60 73 66 60 80 86 66 93 93 40 60 66 26 73 26 93 46 40 73 66 60 93 40 86 66
 4031   76 84 92 92 69 92 ** 84 ** 92 69 69 76 69 61 23 ** 53 76 69 38 69 84 61 ** 76
 4081   57 61 46 61 50 80 96 69 92 92 57 57 53 50 73 34 92 69 88 84 ** 80 ** 69 84 75
 4082   56 50 56 75 43 75 93 75 93 93 75 43 50 43 81 ** ** ** 31 56 ** 43 93 87 87 63
 4290   66 75 60 69 69 91 94 80 92 96 42 57 53 39 66 44 83 41 67 64 64 75 87 66 92 69
 4560   71 68 60 64 68 84 93 75 86 88 57 53 62 51 75 33 82 22 48 57 51 51 80 66 88 69
 4561   40 50 60 55 50 70 ** 60 85 85 65 60 45 45 70 50 80 35 60 45 40 55 90 60 95 61
 4690   60 51 62 65 60 78 92 75 86 87 46 40 56 33 69 42 84 43 53 65 45 59 80 56 80 63
 4070   61 64 64 73 64 67 82 47 76 76 52 64 38 35 61 32 76 14 47 52 64 52 64 58 70 63
 4080   63 54 59 68 68 63 81 59 81 81 63 31 50 18 68 40 72 31 54 68 77 59 77 31 68 63
 4151   73 69 76 77 73 84 87 81 95 91 36 54 51 30 66 48 91 44 54 70 70 77 93 73 93 71
 4190   53 50 46 51 48 78 91 82 91 89 28 50 55 42 69 37 76 32 35 50 60 60 73 60 83 65
 4192   70 70 81 59 62 77 88 74 88 88 33 22 25 51 81 40 88 40 44 62 59 55 81 37 92 66
 4200   75 87 75 75 68 81 87 93 ** 81 93 68 93 18 93 37 81 62 75 68 93 81 ** 81 93 77
 4201   60 73 60 78 73 65 91 69 91 91 60 47 47 52 56 43 82 52 47 56 47 73 95 60 95 68
 4670   57 73 78 68 78 89 94 94 89 94 47 57 26 26 89 21 94 10 42 36 63 68 78 78 ** 69
 DISB   64 64 64 67 63 79 91 75 89 89 48 51 52 38 70 41 85 40 53 61 63 64 84 62 87 67

 4051   70 94 70 52 76 70 88 82 88 ** 82 47 70 23 76 47 82 35 64 41 70 64 88 52 88 75
 4130   68 59 62 68 56 75 87 50 ** 96 21 59 43 34 75 65 93 50 43 56 56 65 87 50 87 68
 4131   70 70 70 80 70 80 ** 75 90 95 30 45 35 20 75 40 95 40 70 50 90 90 95 40 ** 64
 4140   65 61 50 53 50 50 80 80 84 84 34 50 15 53 69 50 88 38 61 46 34 46 76 46 61 58
 4150   84 71 65 78 65 84 93 62 96 90 40 37 53 21 65 40 90 62 56 68 81 68 87 46 93 70
 4250   58 68 56 76 74 70 84 76 76 72 38 40 50 46 60 58 80 48 64 64 64 66 86 62 74 68
 4340   54 64 65 63 64 75 89 72 93 86 29 39 25 36 54 44 68 36 37 45 35 46 69 37 70 54
 4350   67 55 63 59 67 86 90 72 91 87 51 56 42 36 71 44 82 35 50 48 56 63 88 62 91 63
 4390   56 69 56 69 65 86 86 73 95 95 56 52 65 26 47 43 86 43 52 43 43 73 91 60 86 65
 4391   93 73 73 66 46 66 93 80 93 86 40 53 40 13 73 53 ** 26 60 66 66 93 86 86 86 71
 4400   71 76 73 76 81 73 92 76 92 88 43 57 45 38 77 45 84 52 58 55 62 72 93 64 91 70
 4550   77 70 62 66 55 74 85 81 81 85 77 44 88 37 62 44 81 25 25 59 29 62 81 48 85 67
 4022   69 61 76 53 53 84 92 38 76 92 46 38 46 30 76 53 84 30 46 46 46 46 69 53 84 57
 951 RD LEVL 5            TECR5005              11/07/86
PERCENTAGE OF CORRECT ANSWERS PER ITEM
NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY **

SCHL    1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40

 4052  92 85 92 85 92 92 92 92 57 71 57 57 78 71 57 78 57 42 78 78 78 57 85 57 92 78 71 ** 71 78 92 85 50 92 78 ** 78 78 92 85
 4100  87 94 91 82 97 87 90 89 86 63 71 66 85 45 70 74 68 62 74 70 62 47 71 77 90 90 74 95 74 74 78 94 63 86 89 98 62 74 85 81
 4120  85 ** 90 57 80 61 80 71 76 52 71 76 66 38 33 71 28 28 52 33 38 47 52 57 80 76 66 90 76 57 42 90 42 80 71 ** 76 76 85 80
 4121  72 90 90 72 81 54 81 45 72 36 27 18 81 27 45 81 18 27 63 45 45 45 63 54 ** 90 72 ** 90 81 72 90 27 81 81 ** 27 72 63 81
 4530  83 88 88 83 91 66 83 72 75 52 58 61 83 61 58 86 55 66 61 83 63 58 66 66 88 80 77 ** 86 91 77 86 66 97 83 97 69 77 83 63
 4531  82 88 76 70 88 82 76 41 64 47 52 41 64 29 47 58 41 11 58 23 58 23 52 52 58 88 52 88 58 52 58 82 76 58 70 82 58 70 82 58
 4590  65 ** 93 75 96 72 51 72 55 27 51 24 55 31 41 62 41 20 41 41 58 65 62 65 75 65 65 89 62 65 79 82 48 62 72 86 62 68 72 62
 4592  ** ** 75 75 ** ** 75 ** 25 25 75 25 75 50 50 75 ** 50 ** ** ** 25 ** 75 ** ** 75 ** 75 50 75 ** 75 ** ** ** ** ** ** 50
 4630  81 90 76 64 83 73 78 67 41 30 55 47 58 33 30 64 43 21 43 38 78 69 76 67 93 83 67 87 64 75 80 84 63 86 81 90 70 76 84 69
 DISC  77 90 81 66 88 77 71 69 67 42 59 52 70 43 46 70 51 39 54 54 54 43 58 66 82 81 63 89 69 69 72 86 52 77 78 91 63 70 80 70

 4260  ** ** 91 95 91 91 91 82 78 78 82 82 95 82 65 91 56 65 17 60 73 60 56 78 82 78 65 95 86 52 69 91 43 69 78 91 69 73 86 78
 4280  77 96 77 70 90 77 93 87 64 51 74 61 87 48 70 90 77 70 80 80 48 45 61 74 90 90 48 93 67 74 77 90 48 70 58 87 77 74 74 67
 4283  71 86 86 67 86 71 73 73 71 52 65 52 80 56 26 65 45 34 71 69 41 36 63 73 80 69 50 86 56 58 76 86 36 78 73 95 52 80 76 78
 4381  75 87 75 62 75 62 56 81 68 18 62 50 68 43 50 56 56 43 62 50 18 43 31 50 81 81 56 87 68 68 68 81 37 81 87 93 43 75 68 68
 4640  69 79 69 55 71 77 79 66 59 33 74 50 76 44 25 62 49 27 55 52 37 23 55 42 61 72 35 84 54 67 69 74 45 66 61 81 44 62 67 55
 4650  82 96 83 87 87 77 75 70 68 43 54 34 66 44 55 84 67 46 61 62 39 46 45 77 89 77 76 90 72 76 72 87 51 82 84 95 63 73 82 68
 4062  88 ** 91 64 91 79 94 70 61 38 73 64 76 41 44 73 50 35 47 41 41 55 52 67 88 91 64 94 67 73 73 97 73 79 82 ** 76 79 82 67
 4321  61 88 94 55 94 83 44 77 66 44 61 22 66 27 11 22 38 16 55 22 50 16 66 66 94 61 55 ** 61 61 83 94 50 72 94 88 66 94 94 88
 4322  68 77 70 56 68 64 68 47 58 29 43 35 39 39 45 58 35 25 43 33 43 35 43 54 64 66 60 79 58 58 56 64 39 45 66 79 43 54 58 58
 4361  94 94 82 47 82 70 70 47 47 11 41 29 52 23 41 70 35 35 58 52 23 35 35 58 64 58 35 94 64 58 64 82 29 64 52 88 58 64 70 76
 4541  52 80 90 61 71 80 61 52 66 28 47 33 71 42 23 80 47 28 66 33 38 52 52 57 90 66 76 95 42 61 42 76 47 85 85 90 71 85 ** 61
 4543  88 84 92 72 88 80 76 92 72 20 36 40 56 28 12 76 44 20 44 56 44 44 52 68 80 76 64 88 80 48 64 88 36 80 84 ** 64 92 76 60
 DISD  77 89 82 68 82 76 75 69 65 39 60 45 69 44 41 71 52 37 56 53 41 40 51 64 79 75 58 89 64 65 68 83 46 72 75 90 59 73 76 67

 4353  68 90 77 45 86 77 81 72 63 27 86 68 95 63 45 86 40 22 54 63 54 36 68 45 68 81 68 77 68 68 86 86 54 72 68 86 63 81 86 63
 4061  88 90 83 72 90 65 76 76 65 48 53 37 67 53 37 62 51 25 37 41 32 46 51 65 90 86 65 97 74 62 81 97 55 88 83 97 74 86 81 83
 4113  73 88 65 69 88 88 80 57 73 30 92 76 ** 84 76 96 61 57 80 92 46 46 65 80 84 88 73 92 80 61 73 96 65 69 73 96 69 84 84 84
 4210  75 85 75 57 85 70 82 82 67 42 65 60 95 65 55 72 45 50 65 62 37 55 72 57 75 82 55 92 65 67 85 92 52 87 80 ** 75 85 82 67
 4230  73 92 87 73 89 75 76 67 82 58 63 31 66 48 46 74 63 32 58 50 50 47 54 69 77 80 73 90 69 70 77 87 61 81 81 94 60 79 81 70
 4271  88 94 91 73 91 85 73 67 79 55 76 58 94 61 67 91 64 50 79 67 61 38 50 73 91 79 85 97 76 61 88 97 64 94 82 97 70 85 76 55
 4360  81 96 90 72 90 93 72 84 69 60 66 57 75 66 60 66 54 48 24 63 66 60 66 66 84 75 78 93 84 66 78 90 72 87 90 ** 78 87 87 90
 4410  70 88 68 60 78 67 62 57 50 24 65 55 70 47 49 77 57 22 21 36 36 39 50 54 72 72 39 70 60 59 55 77 36 75 78 85 55 68 70 67
 4580  80 86 78 66 87 69 65 60 60 41 44 41 58 46 42 75 45 29 38 48 43 41 57 67 77 74 60 86 63 63 75 88 46 74 73 84 67 65 76 71
 4620  72 87 76 58 82 67 53 56 65 35 51 51 68 47 36 70 46 40 55 55 36 35 53 50 76 71 66 78 60 56 61 87 45 77 66 86 47 67 67 58
 DISE  76 89 80 66 86 73 70 66 68 43 61 48 73 53 48 75 53 35 49 53 44 43 57 63 78 77 65 86 67 63 74 88 53 80 77 91 63 76 77 70

 DISA  75 87 80 67 86 79 76 78 71 45 67 56 79 48 43 68 57 45 55 57 48 45 57 62 76 74 59 86 67 67 73 89 58 81 77 94 61 79 81 68
 DISB  76 91 81 66 85 75 80 72 67 40 73 61 77 48 45 76 61 49 56 62 49 43 57 68 81 79 59 90 70 67 67 85 55 80 77 93 59 76 76 70
 DISC  77 90 81 66 88 77 71 69 67 42 59 52 70 43 46 70 51 39 54 54 54 43 58 66 82 81 63 89 69 69 72 86 52 77 78 91 63 70 80 70
 DISD  77 89 82 68 82 76 75 69 65 39 60 45 69 44 41 71 52 37 56 53 41 40 51 64 79 75 58 89 64 65 68 83 46 72 75 90 59 73 76 67
 DISE  76 89 80 66 86 73 70 66 68 43 61 48 73 53 48 75 53 35 49 53 44 43 57 63 78 77 65 86 67 63 74 88 53 80 77 91 63 76 77 70
 STOT  76 89 81 66 86 76 74 70 67 42 63 52 73 47 45 72 54 41 54 56 48 43 56 65 80 78 61 88 68 66 71 86 52 78 77 92 61 74 78 69
 951 RD LEVL 5           TECR5005             11/07/86
PERCENTAGE OF CORRECT ANSWERS PER ITEM
NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY **

SCHL    41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 TOTAL

 4052   64 71 71 71 64 78 92 71 92 78 28 78 35 50 71 57 ** 50 71 92 64 64 92 35 92 74
 4100   72 68 70 86 70 93 97 86 98 91 62 59 51 39 79 58 93 48 58 72 75 70 91 71 93 76
 4120   71 71 76 71 66 71 90 28 95 95 57 52 57 61 80 42 85 28 52 38 42 61 ** 38 95 65
 4121   54 45 72 72 72 81 ** 81 90 90 54 72 81 18 81 27 72 81 45 90 72 54 81 63 ** 66
 4530   61 72 63 80 63 86 94 75 91 86 91 91 88 75 83 58 86 80 86 80 75 91 88 72 88 77
 4531   58 52 47 70 58 82 76 64 ** 94 29 52 52 52 41 35 76 35 35 47 58 64 70 29 76 60
 4590   51 48 48 58 51 79 96 82 93 96 82 68 55 27 86 27 82 34 55 37 68 68 82 65 82 63
 4592   75 ** 75 ** 50 50 ** ** ** 75  0 75 75 50 75 75 ** 50 50 25 25 25 ** ** ** 75
 4630   56 69 67 64 55 87 86 76 84 86 73 46 50 40 76 35 83 47 66 52 72 55 84 53 76 66
 DISC   65 66 65 69 65 79 90 73 91 88 51 53 49 38 70 47 84 45 55 56 59 65 85 56 85 67

 4260   78 69 60 78 52 73 95 73 95 82 39 56 56 39 78 65 ** 43 43 65 60 60 91 56 91 73
 4280   67 61 74 61 67 93 96 90 96 96 90 96 93 87 96 58 87 48 61 70 77 70 93 67 90 76
 4283   58 58 58 71 58 69 84 63 89 76 41 56 67 32 67 52 84 43 73 56 41 56 84 58 89 65
 4381   75 50 62 56 50 68 87 87 93 68 37 43 18 18 75 50 87 43 43 50 50 37 87 37 87 61
 4640   47 55 61 57 47 67 91 67 89 83 35 49 40 32 72 33 64 18 33 32 37 42 64 42 72 56
 4650   79 76 66 72 73 81 93 76 91 94 48 59 38 37 75 39 88 47 61 68 74 72 87 67 90 70
 4062   67 76 61 73 82 88 91 88 97 82 44 50 35 23 85 41 88 41 67 64 61 76 94 67 94 70
 4321   72 61 44 83 50 66 94 88 88 88 55 88 61 61 72 33 88 55 72 72 61 77 ** 55 88 66
 4322   60 35 43 56 43 70 81 56 81 79 31 41 39 29 68 41 81 31 45 41 43 50 66 27 75 53
 4361   52 52 47 47 58 76 88 88 88 ** 47 41 35 17 82 52 88 29 52 64 52 58 82 70 76 58
 4541   66 52 80 76 66 80 85 80 95 ** 71 76 66 57 80 42 95 47 66 61 61 57 95 52 95 66
 4543   52 56 76 68 80 80 92 76 96 88 64 80 60 52 84 48 92 32 56 52 56 64 76 72 76 66
 DISD   64 60 61 66 61 76 90 75 91 86 48 59 49 39 76 44 84 39 56 56 56 60 82 55 85 65

 4053   50 59 59 59 59 90 90 77 90 ** 59 90 54 40 86 27 90 27 45 50 45 54 77 54 90 66
 4061   81 74 67 62 72 81 ** 79 95 95 44 69 58 58 74 39 97 37 58 58 51 67 95 72 90 69
 4113   80 57 84 61 65 73 80 73 88 92 61 50 53 42 76 42 84 38 57 46 38 69 84 53 92 72
 4210   60 52 52 57 55 82 ** 75 97 92 57 55 67 45 82 47 77 32 55 60 57 75 85 47 85 68
 4230   68 70 67 71 68 75 90 74 91 89 39 54 49 33 75 40 83 46 58 62 54 67 85 60 90 68
 4271   70 67 79 82 73 82 94 88 97 82 52 70 58 44 82 38 91 52 70 58 64 67 97 64 97 74
 4360   72 81 81 75 81 87 93 81 93 90 84 75 63 60 96 60 90 57 69 69 66 81 96 84 84 76
 4410   62 49 55 50 52 83 90 83 86 91 77 70 55 47 65 34 83 47 54 47 49 67 83 57 83 61
 4580   63 60 58 61 64 88 90 74 91 78 53 61 42 31 67 48 75 46 64 63 55 68 81 58 84 63
 4620   63 60 62 66 52 73 86 72 75 82 38 42 36 16 76 35 87 36 45 48 61 50 76 53 88 60
 DISE   66 63 64 64 63 80 91 76 89 87 52 60 50 37 75 41 84 43 57 57 55 66 84 60 88 66

 DISA   67 64 65 69 66 79 91 69 91 85 50 60 55 35 72 44 84 43 61 60 61 67 83 65 88 68
 DISB   64 64 64 67 63 79 91 75 89 89 48 51 52 38 70 41 85 40 53 61 63 64 84 62 87 67
 DISC   65 66 65 69 65 79 90 73 91 88 51 53 49 38 70 47 84 45 55 56 59 65 85 56 85 67
 DISD   64 60 61 66 61 76 90 75 91 86 48 59 49 39 76 44 84 39 56 56 56 60 82 55 85 65
 DISE   66 63 64 64 63 80 91 76 89 87 52 60 50 37 75 41 84 43 57 57 55 66 84 60 88 66
 STDT   65 64 64 67 64 79 90 74 90 87 50 56 51 38 73 43 84 42 56 58 59 64 84 59 86 67
```

READING/LANGUAGE ARTS - LEVEL 6

INSTRUMENT AND POPULATION DESCRIPTION

This is a test comprised of forty-five multiple choice items measuring selected objectives in the curriculum strands of Study Skills (10 items), Language Structure (10 items), Literal Comprehension (5 items), Interpretive Comprehension (7 items), Evaluative Comprehension (3 items), and Vocabulary (10 items). In adthere is a Writing portion that addresses the objectives in the curriculum strands of Writing/the Craft and Writing/Mechanics/ Usage.

The test was organized according to the following domains Listening, Study Skills, Language Structure, Vocabulary, and Reading. Listening contained five items and the other domains each had ten items.

The population includes all students enrolled in grade 6 who took an on-level test and for whom valid answer sheets were submitted.

SYSTEM STRENGTHS AND WEAKNESSES

Overall, students performed fairly well on this test with a system-wide average score on the items of 74%. Generally, students appear to be mastering the objectives in Evaluative Comprehension and most of the items in Literal Comprehension and Study Skills. Within these two domains there are isolated objectives which are not being mastered by more than forty percent of the students. Within Literal Comprehension students had difficulty identifying a sequence of events based on a story (item # 36 and within Study Skills students had difficulty using parts of a book to find information (item # 14).

Greater deficits as strands were found in the areas of Interpretive Comprehension, Vocabulary, and Language Structure. There are two items in Interpretive Comprehension and in Vocabulary and three items in Language Structure which more than forty percent of the students answered incorrectly. In Interpretive Comprehension students had difficulty inferring cause and effect relationships (item # 3) and in Vocabulary the difficulties lay with antonyms and homonyms (item #'s 28 and 35. In Language Structure students had difficulty with identifying prefixes and root words, tenses, and syllabication. (item #'s 18, 21, and 24).

BOSTON PUBLIC SCHOOLS

DEPARTMENT OF EDUCATIONAL TESTING

CURRICULUM REFERENCED FINAL READING/LANGUAGE ARTS - LEVEL 6

1985 - 1986

Section	Item	Objective	Skill
LISTENING	1	B.2	Main idea
	2	B.3	Details
	3	C.4	Inferring cause and effect relation.
	4	C.8	Interpreting figurative language
	5	D.3	Fact/opinion
STUDY SKILLS	6	J.3	Putting words into alph. order
	7	J.3	
	8	J.3	
	9	J.4	Unorganized info. into categories
	10	J.4	
	11	J.4	
	12	J.4	
	13	J.7	Using reference sources to locate info.
	14	J.5	Using parts of book to find info.
	15	J.5	
LANGUAGE STRUCTURE	16	K.2	Identifying pref., root words
	17	K.2	
	18	K.2	
	19	K.2	
	20	K.6	Tenses
	21	K.6	
	22	K.6	
	23	K.4	Syllabication
	24	K.4	
	25	K.4	
VOCABULARY	26	E.2	Synonyms
	27	E.2	
	28	E.2	Antonyms
	29	E.2	
	30	E.3	Word meanings
	31	E.3	
	32	E.5	Multiple meanings
	33	E.5	
	34	E.4	Homonyms
	35	E.4	
READING	36	B.4	Identifying the sequence
	37	C.1	Fiction/non-fiction
	38	C.3	Inferring traits, feelings, & motives
	39	C.8	Interpreting figurative language
	40	D.2	Predicting further outcome
	41	B.2	Main idea
	42	B.3	Details
	43	C.4	Inferring cause and effect relation.
	44	C.6	Writer's purpose
	45	D.1	Drawing comparisons w. own experience

```
 961 RD LEVL 6          TECR5005            11/07/86
PERCENTAGE OF CORRECT ANSWERS PER ITEM
NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY **

SCHL     1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 TOTAL

 2130   90 84 33 92 76 91 69 84 95 95 78 58 89 53 99 85 73 52 90 59 52 84 74 62 87 82 77 59 68 89 75 79 84 89 55 59 78 80 85 66 78 79 56 73 65 76
 2170   83 79 41 89 71 90 83 80 99 98 84 86 93 52 99 83 63 60 88 71 51 89 66 55 86 89 74 57 71 86 83 90 82 81 57 58 70 76 96 55 94 86 59 79 80 77
 4570   76 80 30 80 50 80 80 65 ** ** 80 50 76 61 96 61 65 38 80 42 57 69 65 65 76 73 65 26 42 69 57 61 80 80 34 42 76 57 84 46 73 65 46 61 61 65
 2060   80 76 26 66 42 80 76 64 95 95 92 52 71 38 95 64 52 59 92 40 47 73 54 38 71 73 71 50 61 80 76 73 66 80 38 28 57 64 85 47 61 69 40 47 50 63
 2070   69 83 33 89 73 89 88 81 98 97 80 69 88 58 98 82 59 50 86 67 59 83 69 56 88 88 83 54 69 88 86 86 82 87 50 62 69 79 86 69 83 81 67 72 71 76
 2240   90 65 32 91 68 86 79 75 97 97 87 56 90 36 98 69 68 53 87 53 46 84 64 98 83 90 76 47 57 90 76 83 83 86 43 46 71 79 89 61 83 71 36 69 65 71
 DISA   87 79 34 88 69 88 84 78 97 97 82 66 88 51 98 78 64 53 88 61 53 83 68 57 85 85 77 53 66 86 79 83 81 85 50 54 71 76 88 61 82 78 54 71 69 74

 2110   85 79 33 87 45 81 77 66 97 97 77 56 87 47 97 81 64 45 93 54 39 85 50 35 85 89 64 39 56 85 79 77 79 89 45 60 58 77 87 60 75 62 47 58 66 69
 2120   93 77 38 95 82 79 87 87 98 98 82 85 96 46 98 72 69 46 96 59 53 87 64 51 80 91 75 43 59 85 87 88 83 91 48 61 80 85 90 72 85 80 51 87 79 76
 2140   93 75 41 95 72 88 90 84 98 97 85 64 91 54 98 86 65 72 95 68 67 89 68 48 93 87 80 57 73 89 91 82 80 89 53 59 66 83 91 72 85 82 56 68 69 78
 2200   89 83 35 92 75 86 83 77 97 98 86 68 95 52 95 82 64 56 90 66 57 88 58 38 92 86 78 56 68 91 84 89 87 92 59 62 67 81 88 67 86 80 52 73 74 76
 2950   90 73 45 91 71 84 86 70 97 97 92 67 92 46 93 80 66 60 85 58 57 83 68 48 92 85 76 51 73 94 88 70 79 92 48 54 64 76 85 67 80 69 51 73 63 74
 DISB   91 77 40 92 71 85 86 77 97 97 86 68 93 50 96 81 65 59 91 62 58 86 64 45 90 87 76 52 69 90 87 80 82 91 52 58 67 80 88 68 83 76 52 72 69 75

 2030   69 76 40 63 66 83 64 73 97 97 78 55 82 51 96 75 60 41 89 54 53 75 55 56 82 77 76 41 55 80 76 77 79 82 39 41 59 66 84 47 75 71 45 66 57 69
 2080   95 82 58 96 76 96 91 82 98 99 88 64 98 51 ** 86 70 55 95 67 57 90 71 38 96 90 83 49 63 98 90 88 89 93 53 64 75 85 92 80 90 90 60 75 75 80
 2180   84 83 45 87 62 83 89 72 97 96 84 58 87 45 97 74 66 56 85 54 42 75 62 39 87 76 74 52 61 82 71 78 67 75 56 65 53 75 83 61 73 68 51 69 69 70
 2090   79 79 21 92 66 87 86 75 96 98 77 58 83 38 97 70 74 49 85 71 51 88 53 42 89 83 69 39 58 84 80 78 80 84 55 59 61 78 92 68 80 78 49 71 61 71
 2190   81 81 45 86 62 90 89 81 98 98 88 67 92 57 97 81 74 50 89 60 63 85 57 47 81 80 72 58 65 83 77 83 81 81 49 62 68 78 91 62 79 76 49 66 60 74
 2260   96 85 40 90 67 90 81 74 96 98 92 60 89 56 96 81 69 54 89 47 50 78 54 56 90 87 76 41 70 80 80 90 81 85 52 58 49 90 87 63 74 78 47 70 63 73
 DISC   86 80 42 87 66 87 87 76 97 97 83 60 87 50 97 77 67 49 88 59 53 81 58 47 86 80 75 47 60 83 78 81 79 82 49 56 61 76 87 61 78 75 49 68 63 72

 2010   92 93 41 90 62 94 90 84 95 96 75 60 81 50 99 82 64 60 90 65 56 83 69 65 92 85 87 60 71 80 83 86 82 87 51 60 70 76 87 60 83 80 48 69 62 75
 2040   84 83 38 87 75 83 86 70 98 97 80 60 88 45 96 86 64 51 90 67 67 80 64 48 87 80 77 44 61 83 81 77 80 87 56 59 70 70 88 64 78 81 51 66 66 73
 2050   93 82 51 94 76 93 90 79 ** ** 94 70 96 46 99 75 68 53 94 66 65 87 62 54 91 83 70 54 72 65 91 85 87 91 60 66 77 89 94 80 87 86 47 72 72 78
 DISD   90 86 43 90 71 90 88 78 97 97 83 63 88 47 98 81 65 55 91 66 63 83 65 55 90 83 78 52 68 83 85 83 83 88 56 62 72 78 90 68 82 82 49 69 67 76

 2100   86 78 44 88 69 81 82 78 94 94 87 69 87 53 95 72 67 60 83 63 65 87 66 55 80 78 73 50 60 85 80 78 80 80 45 60 62 71 79 63 75 74 48 72 53 72
 2270   83 82 64 91 64 90 75 72 98 97 88 64 85 50 97 81 53 60 89 58 48 79 58 57 82 80 78 48 65 80 77 71 64 79 45 50 60 64 83 48 73 67 54 61 55 70
 2980   83 78 32 88 68 90 85 78 97 97 89 66 91 56 94 89 58 53 88 71 63 90 70 55 79 83 74 68 76 88 83 78 76 88 47 70 76 77 79 62 77 76 54 65 58 75
 4360   93 81 60 91 77 93 86 85 ** ** 80 75 88 67 93 88 55 65 95 57 52 90 72 77 90 80 88 60 63 85 75 85 68 83 50 49 60 83 81 54 75 70 42 68 72 76
 DISE   85 80 49 89 69 88 81 77 97 96 87 68 88 55 95 82 59 59 88 63 57 86 66 59 82 80 77 56 67 85 79 77 73 82 46 58 65 73 80 57 75 72 50 66 58 73

 DISA   87 79 34 88 69 88 84 78 97 97 82 66 88 51 98 78 64 53 88 61 53 83 68 57 85 85 77 53 66 86 79 83 81 85 50 54 71 76 88 61 82 78 54 71 68 74
 DISB   91 77 40 92 71 85 86 77 97 97 86 68 93 50 96 81 65 59 91 62 58 86 64 45 90 87 76 52 69 90 87 80 82 91 52 58 67 80 88 68 83 76 52 72 69 75
 DISC   86 80 42 87 66 87 87 76 97 97 83 60 87 50 97 77 67 49 88 59 53 81 58 47 86 80 75 47 60 83 78 81 79 82 49 56 61 76 87 61 78 75 49 68 63 72
 DISD   90 86 43 90 71 90 88 78 97 97 83 63 88 47 98 81 65 55 91 66 63 83 65 55 90 83 78 52 68 83 85 83 83 88 56 62 72 78 90 68 82 82 49 69 67 76
 DISE   85 80 49 89 69 88 81 77 97 96 87 68 88 55 95 82 59 59 88 63 57 86 66 59 82 80 77 56 67 85 79 77 73 82 46 58 65 73 80 57 75 72 50 66 58 73
 STOT   88 80 41 89 69 87 86 77 97 97 84 64 89 50 97 80 65 54 89 62 56 84 63 52 87 83 76 51 65 85 81 81 80 86 50 57 67 77 87 63 80 76 51 69 65 74
```

READING/LANGUAGE ARTS - LEVEL 7

INSTRUMENT AND POPULATION DESCRIPTION

This is a test comprised of forty-five multiple choice items measuring selected objectives in the curriculum strands of Study Skills (10 items), Language Structure (10 items), Literal Comprehension (4 items), Interpretive Comprehension (7 items), Evaluative Comprehension (4 items), and Vocabulary (10 items). In addition there is a Writing portion that addresses the objectives in the curriculum strands of Writing/the Craft and Writing/Mechanics/Usage.

The test was organized according to the following domains: Listening, Study Skills, Language Structure, Vocabulary, and Reading. Listening contained five items and the remainder of the domains contained ten items each.

The population includes all students enrolled in grade 7 who took an on-level test and for whom valid answer sheets were submitted.

SYSTEM STRENGTHS AND WEAKNESSES

Overall, students performed well on this test with a systemwide average score on the items of 71%. Generally, students appear to be mastering the objectives in Literal Comprehension, Evaluative Comprehension, Vocabulary, Study Skills, and most of the items in Interpretive Comprehension. In this latter domain students are having difficulty with identifying key points and the writer's purpose in a given passage (item #'s 3 and 37).

The most deficits as a strand can be found in the Language Structure area. There are four items which fewer than fifty percent of the students answered correctly (item #'s 17, 18, 21, and 24). These items addressed identifying types of sentences, parts of speech, and complete subjects and predicates.

BOSTON PUBLIC SCHOOLS

DEPARTMENT OF EDUCATIONAL TESTING

CURRICULUM REFERENCED FINAL

READING/LANGUAGE ARTS - LEVEL 7

1985 - 1986

LISTENING	1	B.2	Main idea
	2	B.3	Details
	3	C.2	Identifying key points
	4	C.4	Inferring cause and effect relation.
	5	D.4	Point of view
STUDY SKILLS	6	J.1	Following directions
	7	J.1	
	8	J.1	
	9	J.7	Using reference sources
	10	J.7	
	11	J.3	Alphabetical order
	12	J.3	
	13	J.3	
	14	J.5	Using parts of book to find info.
	15	J.5	
LANGUAGE STRUCTURE	16	K.1	Types of sentences
	17	K.1	
	18	K.1	
	19	K.3	Parts of speech
	20	K.3	
	21	K.3	
	22	K.5	Complete subjects & predicates
	23	K.5	
	24	K.5	
	25	K.6	Tenses
VOCABULARY	26	E.2	Synonyms
	27	E.2	
	28	E.2	Antonyms
	29	E.2	
	30	E.3	Word meanings
	31	E.3	
	32	E.5	Multiple meanings
	33	E.5	
	34	E.4	Homonyms
	35	E.4	
READING	36	B.4	Identifying the sequence
	37	C.6	Writer's purpose
	38	C.7	Inferring unstated points
	39	C.8	Interpreting figurative language
	40	D.3	Fact/opinion
	41	B.3	Details
	42	C.1	Fiction/non-fiction
	43	C.9	Connotation of words & tone of passage
	44	D.2	Predicting further outcome
	45	D.7	Identifying irrelevant information

```
 971 RD LEVL 7          TECR5005          11/07/86
PERCENTAGE OF CORRECT ANSWERS PER ITEM
NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY **

SCHL    1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 TOTAL

 2130  52 96 58 93 68 91 92 82 82 57 73 82 82 96 88 53 15 32 60 75 35 52 47 46 67 67 78 66 71 71 86 77 86 67 80 68 51 83 84 57 72 71 68 72 55 69
 2170  53 92 54 95 74 92 90 85 79 77 74 82 77 97 87 80 40 65 75 85 40 74 79 57 80 80 86 61 68 77 84 74 90 62 77 75 67 84 89 76 87 90 75 76 62 76
 4570  52 95 52 95 38 ** 95 80 85 80 57 71 85 ** ** 71 19 33 66 66 33 76 71 61 66 52 85 52 76 85 90 57 66 57 90 61 61 85 90 71 85 90 71 66 47 71
 2060  35 86 46 75 53 86 82 80 66 66 55 71 73 93 86 31 22 42 51 75 33 53 31 48 71 80 80 48 55 64 62 71 73 75 75 46 37 64 64 37 73 60 64 57 55 61
 2070  65 99 52 97 65 82 94 85 68 71 70 78 68 ** 89 50 25 43 63 75 43 64 60 45 72 71 91 58 59 72 73 66 83 77 77 75 66 83 86 66 85 88 65 77 56 71
 2240  63 97 49 91 78 88 86 92 86 76 66 72 62 94 85 72 30 47 73 76 27 62 46 43 75 84 91 62 76 86 78 71 88 75 79 59 57 75 89 53 82 73 68 62 59 71
 DISA  55 95 53 92 67 88 90 85 77 71 69 78 74 97 88 61 27 47 66 78 37 63 58 49 73 75 86 60 67 75 79 71 84 70 78 68 59 80 85 62 81 80 69 71 57 71

 2110  54 97 61 95 63 90 93 88 93 68 79 90 75 95 84 47  6 36 84 79 54 72 40 59 77 86 93 63 72 84 88 81 77 75 84 86 68 75 86 70 75 84 72 77 72 74
 2120  67 92 60 92 67 72 90 83 72 78 63 63 65 87 78 65 27 36 54 74 36 41 43 29 81 69 80 63 61 69 67 67 74 74 65 76 52 69 81 60 74 69 61 67 54 66
 2140  62 93 65 94 67 92 93 86 75 81 57 66 68 99 89 67 22 45 64 75 46 65 50 50 76 86 92 62 70 85 75 83 90 73 78 69 64 79 93 68 86 75 75 76 52 73
 2200  67 95 70 92 66 90 88 92 85 78 66 84 78 98 95 63 23 46 77 83 38 56 50 47 78 91 94 56 70 88 78 83 87 70 80 71 52 80 85 66 77 83 64 73 56 74
 2950  65 94 62 88 62 88 92 80 80 79 70 76 62 97 83 66 29 57 80 90 54 74 65 44 80 87 89 59 66 81 81 67 88 78 76 71 62 80 90 58 74 74 66 62 59 73
 DISB  64 94 64 92 65 88 92 85 80 78 66 75 68 96 86 63 23 47 72 82 46 64 53 46 79 85 90 60 68 82 78 76 85 74 77 73 60 78 88 63 78 76 68 70 57 72

 2030  60 92 53 92 59 89 87 81 66 68 62 70 65 95 87 60 35 52 64 70 37 65 55 49 72 77 90 59 65 69 78 61 77 74 84 65 52 73 83 55 71 72 66 68 49 68
 2080  65 89 62 89 65 96 89 90 69 83 72 75 72 98 90 57 13 25 71 87 50 63 46 53 69 78 87 48 59 83 80 75 78 77 81 69 46 77 92 60 87 86 71 87 56 71
 2180  59 93 41 92 66 90 85 89 59 67 61 76 71 97 88 50 21 38 69 71 38 57 43 43 73 67 90 52 58 80 81 63 80 63 75 61 43 77 85 65 77 73 62 76 47 67
 2090  60 97 64 91 72 86 88 85 86 83 66 79 77 96 93 66 42 57 68 83 29 77 62 47 83 80 91 52 58 72 80 83 85 85 87 80 51 82 86 72 90 87 70 72 65 75
 2190  63 96 54 97 73 90 86 85 79 75 65 81 71 99 90 64 21 35 66 76 44 56 46 49 75 75 93 53 56 69 85 69 86 75 81 71 64 78 83 64 79 86 73 76 54 71
 2260  75 98 58 96 83 81 88 86 88 73 64 73 58 96 86 62 11 30 60 71 22 81 28 43 75 84 84 43 64 75 75 79 81 66 75 69 52 69 83 58 79 83 69 75 47 69
 DISC  62 94 54 93 67 89 87 85 72 73 64 75 69 97 89 59 26 42 66 75 37 65 49 47 74 76 90 53 61 74 80 69 81 73 81 68 52 76 85 62 79 79 68 74 52 70

 2310  56 94 50 91 69 93 91 91 82 76 76 85 75 98 86 76 40 59 69 76 41 71 48 55 76 73 85 61 58 71 81 77 89 76 86 78 62 85 88 63 79 81 69 73 63 74
 2040  75 89 51 86 74 89 93 84 71 66 55 71 65 94 88 45 20 28 56 75 35 53 43 43 67 74 89 43 52 76 85 62 86 74 82 68 47 74 83 56 68 72 62 69 49 66
 2050  62 96 67 95 72 90 94 87 78 74 71 77 70 ** 88 56 20 48 56 84 36 58 49 49 78 79 92 65 76 88 82 75 87 75 84 76 54 81 86 75 70 77 68 68 49 72
 DISD  63 94 57 91 72 91 93 87 78 72 69 78 70 98 87 60 27 47 61 79 37 62 47 50 74 76 89 58 63 79 82 72 88 75 85 75 55 80 86 66 73 77 67 70 54 71

 1240  46 98 71 91 83 93 89 89 94 88 62 81 76 94 92 63 38 53 73 84 58 78 61 47 84 89 90 72 82 81 82 77 88 88 86 78 73 89 88 68 84 78 72 79 55 77
 2100  64 84 50 84 64 88 83 82 74 73 59 66 62 90 81 51 21 26 60 72 47 52 38 44 69 64 78 53 50 67 67 65 80 67 75 63 38 73 77 58 65 64 61 61 46 63
 2270  50 77 45 80 65 87 87 87 67 67 62 70 61 97 83 56 10 51 54 67 27 57 62 48 70 74 79 55 56 73 78 69 78 63 80 62 60 74 79 55 61 76 61 57 46 65
 2980  57 91 45 91 69 89 86 84 72 76 55 71 59 95 77 66 16 34 60 71 22 63 46 46 68 75 83 55 66 75 72 74 90 75 62 68 56 78 81 61 76 74 64 62 37 67
 DISE  53 88 54 87 71 89 86 86 77 76 59 73 65 94 84 59 22 42 62 74 39 64 53 46 73 76 83 59 65 75 75 72 84 74 76 68 58 79 82 61 72 73 65 66 46 69

 DISA  55 95 53 92 67 88 90 85 77 71 69 78 74 97 88 61 27 47 66 78 37 63 58 49 73 75 86 60 67 75 79 71 84 70 78 68 59 80 85 62 81 80 69 71 57 71
 DISB  64 94 64 92 65 88 92 85 80 78 66 75 68 96 86 63 23 47 72 82 46 64 53 46 79 85 90 60 68 82 78 76 85 74 77 73 60 78 88 63 78 76 68 70 57 72
 DISC  62 94 54 93 67 89 87 85 72 73 64 75 69 97 89 59 26 42 66 75 37 65 49 47 74 76 90 53 61 74 80 69 81 73 81 68 52 76 85 62 79 79 68 74 52 70
 DISD  63 94 57 91 72 91 93 87 78 72 69 78 70 98 87 60 27 47 61 79 37 62 47 50 74 76 89 58 63 79 82 72 88 75 85 75 55 80 86 66 73 77 67 70 54 71
 DISE  53 88 54 87 71 89 86 86 77 76 59 73 65 94 84 59 22 42 62 74 39 64 53 46 73 76 83 59 65 75 75 72 84 74 76 68 58 79 82 61 72 73 65 66 46 69
 STOT  60 93 56 91 68 89 89 85 76 74 65 76 69 96 87 61 25 45 66 77 39 64 52 48 75 77 88 58 64 76 79 72 84 73 79 70 56 78 85 63 77 77 67 71 53 71
```

READING/LANGUAGE ARTS - LEVEL 8

INSTRUMENT AND POPULATION DESCRIPTION

This is a fifty-five item multiple choice test developed by the State Department of Education and mandated for grade 8 students. Since it broadly correlates with the curriculum objectives and in the interest of limiting testing, the instrument serves as both the final exam for grade 8 students and the State Basic Skills Test.

The population includes all grade 8 students who were eligible to take the Basic Skills test in Reading.

SYSTEM STRENGTHS AND WEAKNESSES

Overall, students performed fairly well on this test with a system-wide average score of 71%. Since the test was developed outside the system, the test is not divided into domains as is the case with the locally developed tests; however, for analysis individual items were categorized into the following broad categories: Basic Word Meaning, Literal, Interpretive, and Evaluative Comprehension. Generally, students appear to have mastered the items that could be described as being in the domain of Literal Comprehension and most of the items within the other domains. However, there are isolated objectives which are not being mastered by more than fifty percent of the students. With Basic Word Meaning students are having difficulty with determining the meaning of words within sentences (item # 5). In Evaluative Comprehension the difficulty lies with the item that taps determining the writer's purpose (item # 6). In Interpretive Comprehension students are not mastering drawing implied conclusions.

These data suggest that although students have obtained mastery of basic skills in many areas, there are selected deficits in each of the domains.

BOSTON PUBLIC SCHOOLS

DEPARTMENT OF EDUCATIONAL TESTING

BASIC SKILLS TEST - FORM 7

READING
LEVEL 8

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55

Identify meaning of commonly used wds. within sentence, no clues to
meaning of the word are given

Identify meaning of written phrase, clause, sentence or paragraph
Identify writer's purpose in a parag. or passage written to inform
Demonstrate the ability to follow directions

Identify a statement as fact or opinion
Recognize sequence of events or ideas in a written passage
Draw conclusions implied in a paragraph or passage
Predict an outcome implied in a paragraph or passage
Identify the main idea, supporting details, & conclusion of a paragraph
Predict an outcome implied in a paragraph or passage
Draw conclusions implied in a paragraph or passage
Identify cause/effect relationship implied in a paragraph or passage
Identify writer's purpose in a parag. or passage written to persuade
Identify meaning of word within a sentence that provides clues to the
meaning of the word

Identify the main idea,supporting details, and conclusion of a paragraph
Identify the meaning of a written phrase, clause, sentence or paragraph
Identify a statement as fact or opinion
Identify the main idea, supporting details, and conclusion of a paragraph
Identify cause/effect relationship implied in a paragraph or passage
Identify meaning of a written phrase, clause, sentence or paragraph
Identify writer's purpose in a paragraph or passage written to inform
Use the parts of a book

Identify cause/effect relationship implied in a paragraph or passage
Recognize the sequence of events or ideas in a written passage
Identify a statement as fact or opinion
Draw conclusions implied in a paragraph or passage
Locate information in a variety of sources

Identify cause/effect relationship implied in a paragraph or passage
Draw conclusions implied in a paragraph or passage
Identify the main idea, supporting details, and conclusion of a paragraph

Predict an outcome implied in a paragraph or passage
Identify a statement as fact or opinion
Identify main idea, supporting details, and conclusion of a paragraph
Demonstrate the ability to follow directions

Identify the meaning of a written phrase, clause, sentence or paragraph
Draw conclusions implied in a paragraph or passage
Recognize the sequence of events or ideas in a written passage
Identify main idea, supporting details, and conclusion in a paragraph
Identify information on a chart, map or graph

```
 981 RD LEVL 8          TECR5005              11/07/86
PERCENTAGE OF CORRECT ANSWERS PER ITEM
NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY **

SCHL     1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40

 2130   78 44 81 85 27 17 51 93 58 55 46 20 66 31 79 72 72 44 40 78 89 79 60 62 67 76 76 59 69 89 56 76 71 81 68 97 94 97 72 29
 2170   67 51 76 76 26 37 57 95 68 53 51 26 69 83 84 73 71 54 30 73 78 83 64 61 60 66 72 59 64 90 54 76 66 74 69 95 89 97 72 30
 4570   91 52 73 86 39 26 69 ** 69 52 60 30 56 78 69 52 69 43 39 65 65 56 60 65 60 73 69 56 56 78 56 86 65 52 78 82 95 91 73 47
 2060   68 44 94 97 15 18 57 92 65 44 60 42 76 84 86 81 84 26 42 81 84 81 65 65 50 78 81 76 68 89 57 81 60 73 78 97 94 ** 84 31
 2070   80 65 77 79 35 30 72 90 72 60 54 39 57 68 75 63 70 49 43 75 82 78 61 54 56 69 60 60 70 86 59 77 57 74 63 90 85 87 62 18
 2240   71 49 83 81 32 37 54 86 60 64 56 28 50 77 84 67 83 56 45 73 88 77 66 67 60 73 67 66 71 88 37 83 58 79 83 96 92 98 75 33
 DISA   75 54 79 81 29 29 61 92 67 56 53 31 63 77 80 68 73 48 39 75 82 79 62 60 59 71 68 61 68 88 55 78 62 75 69 93 90 94 70 27

 2110   79 51 81 89 20 22 59 89 63 59 67 34 73 89 97 79 87 48 46 79 95 83 65 65 65 81 75 73 67 81 63 83 61 77 67 93 93 97 71 38
 2120   60 48 71 88 26 41 56 ** 71 56 58 33 75 86 83 80 81 45 40 78 85 90 63 71 65 78 76 75 68 91 60 85 75 73 75 95 93 98 73 35
 2140   82 60 80 93 52 42 76 98 75 66 69 44 71 88 88 82 82 49 65 80 85 87 75 68 66 73 71 68 65 91 62 81 70 76 67 90 91 89 66 35
 2200   85 67 83 91 32 52 79 98 76 57 56 48 70 83 86 81 84 57 62 87 93 89 70 68 58 76 81 81 74 89 75 91 82 75 85 98 97 ** 67 29
 2950   86 62 87 90 43 37 48 90 78 66 63 30 67 90 90 79 87 50 56 81 90 89 65 61 62 81 77 78 77 95 78 85 75 78 68 90 94 90 81 19
 DISB   81 60 81 91 38 40 64 95 74 62 63 38 70 87 89 80 84 50 57 81 89 88 68 66 63 77 76 75 71 91 69 85 73 76 72 93 94 94 72 29

 2030   73 54 67 87 25 22 48 94 62 54 53 30 68 82 83 70 77 43 40 68 84 80 58 63 54 76 67 70 69 88 51 82 69 71 71 94 90 94 63 27
 2080   72 40 77 80 16 31 41 88 57 35 57 20 54 72 66 67 77 32 36 53 77 75 51 63 38 66 59 58 54 88 53 71 61 62 62 88 89 89 75 22
 2180   66 48 73 84 24 29 61 91 64 38 49 34 67 84 78 70 76 36 36 70 78 74 52 62 36 68 71 68 56 90 59 76 69 66 64 87 86 86 60 32
 2090   72 58 66 90 26 24 70 97 73 59 63 25 61 87 83 75 82 43 46 75 83 80 62 73 49 72 75 59 59 87 58 85 70 75 62 97 88 97 66 29
 2190   91 59 72 82 27 36 54 90 61 54 47 29 60 72 70 66 72 40 36 61 78 75 55 57 64 66 59 58 63 84 54 66 64 64 69 93 87 90 60 23
 2260   67 36 73 92 17 25 48 ** 63 32 36 36 61 92 90 71 80 28 23 69 80 80 63 71 32 75 73 51 65 90 46 73 69 73 69 94 88 98 67 28
 DISC   74 51 71 85 24 27 55 93 63 48 52 29 63 81 78 70 77 39 38 67 80 77 57 64 48 71 67 63 62 88 54 76 67 68 67 92 88 92 64 27

 2010   83 52 79 81 39 27 54 95 70 47 55 31 66 79 81 76 81 42 49 74 79 82 57 62 41 76 66 64 64 87 52 78 74 69 69 97 95 97 73 30
 2040   70 45 76 83 34 28 56 92 56 47 45 50 68 85 84 76 71 44 45 68 85 83 55 56 50 75 79 60 62 86 64 84 63 63 74 90 92 91 70 29
 2050   77 64 81 86 35 26 55 92 78 69 56 27 75 83 87 76 72 49 51 78 92 86 67 62 64 75 80 60 71 89 61 81 67 75 76 95 95 97 75 32
 DISD   77 55 79 84 36 27 55 93 70 56 53 34 70 82 84 76 75 46 49 74 86 84 60 60 52 75 75 61 67 88 59 81 69 70 73 94 94 95 73 30

 1010   95 88 97 98 68 56 84 98 92 86 85 40 83 97 98 97 91 75 85 98 97 97 94 89 82 85 85 86 86 98 80 92 83 93 82 95 97 97 93 60
 1020   85 72 92 97 51 45 71 97 85 74 73 38 71 95 96 96 87 59 77 90 96 95 87 86 67 82 85 83 78 95 69 94 71 84 79 96 97 98 93 49
 1240   79 53 76 83 34 27 52 94 60 47 52 31 61 72 74 66 72 46 37 72 85 84 64 64 52 62 65 64 57 86 54 75 62 65 62 89 84 88 64 25
 2100   75 48 68 79 25 36 54 87 62 47 43 25 62 75 70 62 67 40 42 62 79 81 66 60 57 62 63 56 61 77 58 74 58 57 59 83 87 89 65 24
 2270   70 43 70 69 22 13 54 90 61 31 45 27 51 73 75 58 68 45 36 62 73 80 58 63 43 68 62 62 65 88 40 75 61 63 63 94 86 90 58 11
 2980   79 57 85 91 34 44 71 95 76 50 57 38 58 91 88 77 85 47 53 80 84 83 55 75 64 65 69 69 73 95 65 79 65 76 77 94 90 97 79 32
 DISE   86 70 87 91 49 43 70 95 60 67 68 36 71 89 89 85 83 59 66 85 91 91 80 79 67 76 77 76 75 93 67 86 72 80 75 93 93 95 83 43

 DISA   75 54 79 81 29 29 61 92 67 56 53 31 63 77 80 68 73 48 39 75 82 79 62 60 59 71 68 61 68 88 55 78 62 75 69 93 90 94 70 27
 DISB   81 60 81 91 38 40 64 95 74 62 63 38 70 87 89 80 84 50 57 81 89 88 68 66 63 77 76 75 71 91 69 85 73 76 72 93 94 94 72 29
 DISC   74 51 71 85 24 27 55 93 63 48 52 29 63 81 78 70 77 39 38 67 80 77 57 64 48 71 67 63 62 88 54 76 67 68 67 92 88 92 64 27
 DISD   77 55 79 84 36 27 55 93 70 56 53 34 70 82 84 76 75 46 49 74 86 84 60 60 52 75 75 61 67 88 59 81 69 70 73 94 94 95 73 30
 DISE   86 70 87 91 49 43 70 95 60 67 68 36 71 89 89 85 83 59 66 85 91 91 80 79 67 76 77 76 75 93 67 86 72 80 75 93 93 95 83 43
 STOT   79 60 80 87 37 35 62 94 72 59 59 34 67 84 84 77 79 50 52 77 86 85 68 68 59 74 73 69 69 90 61 82 69 75 71 93 92 94 74 33
 981 RD LEVL 8            TECR5005              11/07/86
PERCENTAGE OF CORRECT ANSWERS PER ITEM
NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY **

SCHL    41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 TOTAL

 2130   75 59 57 60 53 95 86 92 56 40 77 73 70 83 77 67
 2170   71 57 66 61 52 90 90 92 62 49 71 75 87 86 72 68
 4570   60 39 52 52 39 86 69 73 73 39 52 73 60 73 60 63
 2060   65 55 65 60 50 ** 92 97 52 63 89 76 73 97 78 70
 2070   63 43 46 50 48 82 70 79 45 47 58 57 70 78 71 64
 2240   77 67 54 66 54 90 88 96 71 49 67 67 81 77 60 68
 DISA   69 53 56 57 50 89 82 88 56 47 68 68 75 82 71 66

 2110   75 59 57 46 53 79 81 95 53 40 77 69 69 87 67 69
 2120   76 71 80 61 56 95 86 96 63 46 70 70 70 76 66 70
 2140   79 71 66 60 63 90 83 90 64 56 76 75 80 82 71 73
 2200   80 67 67 64 64 92 93 94 56 51 74 61 76 80 67 75
 2950   71 65 55 65 64 89 87 80 57 62 69 74 73 81 60 72
 DISB   76 67 64 61 62 90 86 89 59 54 73 70 75 81 66 72

 2030   76 60 55 54 53 90 78 91 54 47 65 61 70 81 55 66
 2080   64 55 50 44 44 81 83 83 50 49 49 55 64 64 61 59
 2180   71 58 60 48 52 86 73 84 51 45 52 46 54 64 51 62
 2090   75 63 58 63 58 91 88 96 61 47 67 75 70 75 76 68
 2190   71 48 56 58 51 88 75 85 49 45 69 63 59 78 66 63
 2260   84 48 46 51 61 96 96 98 48 40 82 69 86 78 73 65
 DISC   73 57 56 54 53 88 80 89 53 46 63 60 65 74 61 64

 2010   81 64 61 61 58 94 85 95 64 52 73 76 82 83 75 69
 2040   75 52 54 57 61 87 88 91 61 43 67 65 73 77 72 66
 2050   78 67 67 63 59 92 86 92 60 63 71 74 80 82 74 71
 DISD   78 62 62 61 59 91 86 93 61 54 71 72 79 81 74 69

 1010   93 94 90 80 77 96 96 96 84 85 82 90 90 89 87 87
 1020   90 88 84 70 75 96 94 96 79 84 80 90 90 88 90 82
 1240   72 50 52 52 41 87 72 85 56 54 67 64 68 71 56 64
 2100   66 51 51 47 42 86 73 81 58 49 61 62 74 75 62 61
 2270   77 48 59 40 51 90 69 81 43 54 80 54 65 70 61 60
 2980   80 64 75 65 61 89 89 92 70 59 78 89 91 86 76 73
 DISE   84 77 76 67 65 93 88 92 72 73 77 81 84 83 78 77

 DISA   69 53 56 57 50 89 82 88 56 47 68 68 75 82 71 66
 DISB   76 67 64 61 62 90 86 89 59 54 73 70 75 81 66 72
 DISC   73 57 56 54 53 88 80 89 53 46 63 60 65 74 61 64
 DISD   78 62 62 61 59 91 86 93 61 54 71 72 79 81 74 69
 DISE   84 77 76 67 65 93 88 92 72 73 77 81 84 83 78 77
 STOT   77 65 64 60 58 90 84 90 62 57 71 71 76 80 71 71
```

HIGH SCHOOL ENGLISH

ENGLISH - BASIC

INSTRUMENT AND POPULATION DESCRIPTION

This is a test comprised of thirty-five multiple choice items measuring selected objectives in the curriculum strands of Literal, Interpretive, and Evaluative Comprehension, and Vocabulary. In addition there is a writing portion that addresses the objectives in the curriculum strands of Writing/the Craft and Writing/Mechanics/Usage.

So that the test may be content valid for each high school, yet at the same time provide a measure of student performance system-wide, the test contains both school-developed and centrally-developed portions. The test is organized so that items 1-15 are school-developed and tap literal and interpretive objectives, items 16-25 are school-developed and address Vocabulary objectives, and items 26-35 are centrally developed and measure interpretive comprehension objectives (5 items), and evaluative comprehension objectives (5 items). Since the school-developed items vary from school to school, only the centrally-developed items will be analyzed.

The population includes all high school students (with the exception of the exam schools) who took a Basic English course and for whom valid answer sheets were submitted.

SYSTEM STRENGTHS AND WEAKNESSES

Overall, students performed poorly on this test with a system-wide average score of 53%. Of the five items measuring evaluative comprehension, there were two which fewer than fifty percent of the students answered correctly. Students are having difficulty comparing two views of the same issue (item # 26), and identifying related and unrelated supporting details (item # 31). Of the five items measuring interpretive comprehension, there were four which fewer than fifty percent of the students answered correctly. Students are having difficulty with fact and opinion (item # 30) and with figurative language (item #'s 33, 34, and 35).

BOSTON PUBLIC SCHOOLS

DEPARTMENT OF EDUCATIONAL TESTING

CURRICULUM REFERENCED FINAL

ENGLISH - BASIC

1985 - 1986

PART I	PART II	PART III
1 - 15	16 - 25	26 27 28 29 30 31 32 33 34 35
School-developed portion- objectives drawn from categories B and C of High School Curriculum Objectives	School-developed portion- objectives drawn from category E of High School Curriculum Objectives	D.4 Comparing two views of same issue D.2 Evaluating written material D.5 Distinguishing bet. clear & unclear mat. C.14 } Fact/opinion C.14 } D.6 } Related/unrelated supporting details D.6 } C.10 } C.10 } Figurative language C.10 }

```
 991 BAS ENG           TECR5005             11/07/86
PERCENTAGE OF CORRECT ANSWERS PER ITEM
NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY **

SCHL    1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 TOTAL

 1040  69 66 72 46 24 69 69 52 58 49 44 58 67 75 58 55 44 81 55 40 66 67 40 60 50 50 75 58 72 40 44 60 23 38 27 55
 1110  61 73 67 72 69 77 63 46 68 75 47 65 81 73 56 40 32 67 40 68 56 81 81 89 90 50 56 52 63 42 27 55 44 43 28 60
 DISA  65 70 69 60 48 73 65 48 63 63 46 62 75 74 57 47 38 73 47 55 60 75 62 75 72 50 65 55 67 41 35 57 34 41 28 58

 1250  50 75 12 75 25 25 87 12 37 25 62 43 50 43 25 31 12  6 25 25  6 18  6  0  0 12 18 62 37 43 37 50 18 31 18 31
 1100  79 74 67 81 91 77 46 77 65 72 56 37 82  5 51 48 89 50 51 81 50 62 44 39 67 67 81 41 77 44 50 41 31 31 27 58
 DISB  72 74 55 79 77 66 55 63 59 62 58 39 75 13 45 44 72 40 45 68 40 52 36 31 52 55 67 45 68 44 47 43 28 31 25 52

 1060  72 70 84 96 86 76 66 72 86 78 49 66 64 64 64 66 45 76 70 29 68 84 78 45 68 54 68 43 56 47 23 60 45 39  3 62
 1120  54 58 25 29 37 37 41 33 37 37 33 41 54 62 54 37 66 54 33 62 50 50 25 70 54 54 50 50 70 41 41 50 16 29 12 44
 2030   0  0 ** **  0  0  0  0 ** **  0  0 ** ** **  0  0  0 **  0  0 **  0  0  0 ** **  0  0  0  0 ** **  0  0 37
 1160  32 75 67 75 46 46 71 85 64 64 78 42 75 35 67 57 46 75 78 75 96 85 ** 78 89 50 67 46 64 50 35 57 32 28 17 61
 DISC  56 68 66 75 63 58 61 66 69 65 52 53 65 56 63 56 50 70 64 49 71 76 71 59 70 53 64 45 61 46 30 57 35 33  9 57

 1050  46 66 36 47 30 36 73 32 43 79 53 42 40 53 46 53 56 33 52 22 40 60 57 58 57 35 49 63 56 36 29 39 29 40 23 46
 1070  27 77 13 80 19 30 78 27 34 68 57 28 63 74 28 36 21 30 31 19 19 28 22 37 39 24 21 45 21 27 25 30 30 65 24 37
 DISD  40 70 28 58 27 34 75 30 40 75 54 37 48 60 40 47 44 32 45 21 33 49 45 51 51 31 39 57 44 33 28 36 29 48 23 43

 1080  73 72 75 70 82 48 70 77 84 47 76 79 53 73 62 60 86 76 56 57 79 55 80 29 33 58 59 48 68 52 31 63 40 36 35 61
 1210  62 43 62 50 62 50 75 62 62 62 75 93 81 81 75 62 62 56 62 62 68 81 56 75 62 56 50 56 68 50 12 50 31 25 62 60
 1240  74 44 56 48 65 82 48 51 74 60 36 70 46 60 43 50 51 75 56 55 48 70 25 53 32 63 67 44 56 58 34 65 37 27 27 53
 DISE  72 61 68 62 75 58 64 68 79 52 64 77 53 70 57 57 73 74 57 57 68 62 61 40 35 60 61 47 65 54 30 63 38 32 35 59

 DISA  65 70 69 60 48 73 65 48 63 63 46 62 75 74 57 47 38 73 47 55 60 75 62 75 72 50 65 55 67 41 35 57 34 41 28 58
 DISB  72 74 55 79 77 66 55 63 59 62 58 39 75 13 45 44 72 40 45 68 40 52 36 31 52 55 67 45 68 44 47 43 28 31 25 52
 DISC  56 68 66 75 63 58 61 66 69 65 52 53 65 56 63 56 50 70 64 49 71 76 71 59 70 53 64 45 61 46 30 57 35 33  9 57
 DISD  40 70 28 58 27 34 75 30 40 75 54 37 48 60 40 47 44 32 45 21 33 49 45 51 51 31 39 57 44 33 28 36 29 48 23 43
 DISE  72 61 68 62 75 58 64 68 79 52 64 77 53 70 57 57 73 74 57 57 68 62 61 40 35 60 61 47 65 54 30 63 38 32 35 59
 STOT  59 68 56 64 55 55 66 53 61 63 55 56 60 60 52 51 55 58 51 46 54 62 56 52 54 48 57 51 59 43 32 51 33 38 25 53
```

ENGLISH - GENERAL

INSTRUMENT AND POPULATION DESCRIPTION

This is a test comprised of forty multiple choice items measuring selected objectives in the curriculum strands of Literal, Interpretive, and Evaluative Comprehension, and Vocabulary. In addition there is a writing portion that addresses the objectives in the curriculum strands of Writing/the Craft and Writing/Mechanics/Usage.

So that the test may be content valid for each high school, yet at the same time provide a measure of student performance system-wide, the test contains both school-developed and centrally-developed portions. The test is organized so that items 1-17 are school-developed and tap literal and interpretive objectives, items 18-27 are school-developed and address Vocabulary objectives, and items 28-40 are centrally developed and measure literal comprehension objectives (2 items), interpretive comprehension objectives (8 items), and evaluative comprehension objectives (3 items). Since the school-developed items vary from school to school, only the centrally-developed items will be analyzed.

The population includes all high school students (with the exception of the exam schools) who took a General English course and for whom valid answer sheets were submitted.

SYSTEM STRENGTHS AND WEAKNESSES

Overall, students performed poorly on this test with a system-wide average score of 59%. Of the thirteen centrally-developed items there were nine which fewer than fifty percent of the students answered correctly. In literal comprehension students had difficulty with identifying types of logical order (items #'s 33 and 34). In interpretive comprehension students had difficulty with identifying points of view, writer's purpose, and figurative language (item #'s 29, 30, 38, and 39). In evaluative comprehension students have not mastered evaluating written material and distinguishing between related and unrelated ideas.

BOSTON PUBLIC SCHOOLS

DEPARTMENT OF EDUCATIONAL TESTING

CURRICULUM REFERENCED FINAL

ENGLISH - GENERAL

1985 - 1986

PART I	PART II	PART III												
1 - 17	18 - 27	28	29	30	31	32	33	34	35	36	37	38	39	40
School-developed portion - objectives drawn from categories B and C of High School Curriculum Objectives	School-developed portion - objectives drawn from category E of High School Curriculum Objectives	D.2 Evaluating written material	C.13 Identifying points of view in fiction	C.3 Writer's purpose	D.6 Related/unrelated supporting details	D.6 Types of logical order	B.4	B.4	C.14 Fact/opinion	C.14	C.10 Figurative language	C.10	C.10	C.10

```
 992 GEN ENG            TECR5005            11/07/86
PERCENTAGE OF CORRECT ANSWERS PER ITEM
NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY **

SCHL    1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 TOTAL

 1040  79 79 61 84 69 76 64 87 74 76 66 76 92 71 87 64 82 64 69 89 74 74 87 76 84 76 79 58 25 48 38 30 38 33 43 71 38 35 35 41 65
 1110  83 62 27 87 89 85 56 45 79 62 70 68 50 83 50 68 64 77 52 52 54 58 72 68 75 68 93 41 39 56 39 18 45 43 64 64 77 22 35 52 60
 DISA  81 70 42 86 80 81 59 64 77 68 68 72 68 78 66 66 72 71 59 68 63 65 79 72 79 72 87 49 33 52 39 24 42 39 55 67 59 28 35 47 62

 1250  79 72 46 94 79 74 51 81 63 46 76 80 66 74 61 48 35 71 46 46 85 72 94 96 83 36 38 46 36 37 45 38 54 31 62 53 51 27 22 48 59
 1100  73 44 84 76 81 89 50 55 89 60 81 81 34 44 28 52 15 26 92 36 50 52 78 60 84 57 23 39 47 42 47 42 44 34 76 55 57 50 26 44 55
 DISB  77 63 59 88 80 79 51 73 72 51 78 80 55 64 50 49 28 56 61 43 73 66 89 84 83 43 33 44 40 39 46 40 51 32 66 53 53 34 23 46 57

 1060  67 52 65 60 72 60 47 65 85 62 57 42 60 45 37 47 45 35 45 62 25 55 45 62 37 27 42 52 57 45 55 40 42 50 72 77 75 60 52 57 53
 1120  67 46 53 71 57 57 60 17 60 67 35 75 57 71 64 71 57 71 71 57 35 64 50 39 32 42 53 53 42 50 50 32 60 35 53 60 39 17 14 57 51
 1160  76 58 72 78 69 64 76 61 47 93 83 76 61 68 26 30 86 64 87 69 47 72 50 43 79 46 90 54 38 34 41 45 49 31 72 69 72 45 32 71 61
 DISC  72 54 66 71 68 61 65 53 60 79 66 66 60 62 36 43 68 57 72 65 39 65 48 48 58 40 69 53 44 40 46 41 49 37 68 70 66 43 34 64 57

 1050  88 84 96 84 73 ** 84 65 80 65 76 57 61 65 80 69 73 61 73 38 80 61 92 57 80 69 61 61 46 53 34 61 50 65 65 69 57 69 11 76 67
 DISD  88 84 96 84 73 ** 84 65 80 65 76 57 61 65 80 69 73 61 73 38 80 61 92 57 80 69 61 61 46 53 34 61 50 65 65 69 57 69 11 76 67

 1080  61  9 74 83 52 60 44 66 23 43 30 42 46 26 84 70 77 79 78 38 85 90 84 82 90 35 50 61 54 45 41 32 38 43 72 62 69 45 27 59 56
 1210  84 73 84 82 70 89 73 80 71 70 64 47 73 89 64 66 75 78 65 77 84 82 80 73 75 68 80 31 57 35 47 36 40 52 57 52 61 43 43 57 66
 1240  70 82 50 61 77 76 97 81 63 65 76 61 91 36 67 65 61 66 37 61 50 87 65 31 62 80 82 43 42 53 31 40 31 48 73 67 50 35 26 60 60
 DISE  69 49 68 75 65 72 69 75 48 57 54 50 68 44 74 67 71 75 66 55 73 87 77 63 77 58 68 48 51 45 39 36 36 47 69 61 61 41 30 59 60

 DISA  81 70 42 86 80 81 59 64 77 68 68 72 68 78 66 66 72 71 59 68 63 65 79 72 79 72 87 49 33 52 39 24 42 39 55 67 59 28 35 47 62
 DISB  77 63 59 88 80 79 51 73 72 51 78 80 55 64 50 49 28 56 61 43 73 66 89 84 83 43 33 44 40 39 46 40 51 32 66 53 53 34 23 46 57
 DISC  72 54 66 71 68 61 65 53 60 79 66 66 60 62 36 43 68 57 72 65 39 65 48 48 58 40 69 53 44 40 46 41 49 37 68 70 66 43 34 64 57
 DISD  88 84 96 84 73 ** 84 65 80 65 76 57 61 65 80 69 73 61 73 38 80 61 92 57 80 69 61 61 46 53 34 61 50 65 65 69 57 69 11 76 67
 DISE  69 49 68 75 65 72 69 75 48 57 54 50 68 44 74 67 71 75 66 55 73 87 77 63 77 58 68 48 51 45 39 36 36 47 69 61 61 41 30 59 60
 STOT  74 57 63 79 71 73 64 67 61 63 64 63 63 58 60 58 62 66 66 56 64 74 73 64 74 53 64 49 44 44 42 37 43 41 66 63 60 40 30 57 59
```

ENGLISH - SECONDARY I

INSTRUMENT AND POPULATION DESCRIPTION

This is a test comprised of forty-five multiple choice items measuring selected objectives in the curriculum strands of Literal, Interpretive, and Evaluative Comprehension and Vocabulary. In addition there is a writing portion that addresses the objectives in the curriculum strands of Writing/the Craft and Writing/Mechanics/Usage.

So that the test may be content valid for each high school, yet at the same time provide a measure of student performance system-wide, the test contains both school-developed and centrally-developed portions. The test is organized so that items 1-20 are school-developed and tap literal and interpretive objectives, items 21-29 are school-developed and address Vocabulary objectives, and items 30-45 are centrally-developed and measure literal comprehension objectives (2 items), interpretive comprehension objectives (7 items), and evaluative comprehension objectives (7 items). Since the school-developed items vary from school to school, only the centrally-developed items will be analyzed.

The population includes all high school students (with the exception of the exam schools) who took a Secondary I English course and for whom valid answer sheets were submitted.

SYSTEM STRENGTHS AND WEAKNESSES

Overall, students performed poorly on this test with a system-wide average score of 58%. Of the sixteen centrally-developed items there are nine which fewer than fifty percent of the students answered correctly. In literal comprehension students had difficulty with types of logical order (item #'s 30 and 31). In interpretive comprehension students were unclear as to evaluating written material, distinguishing between clear and unclear material, and identifying a writer's bias or prejudice (items #'s 32, 33, and 36). In evaluative comprehension students are not mastering the items related to fact/opinion (item # 40) and figurative language (item #'s 42, 43, and 44).

BOSTON PUBLIC SCHOOLS

DEPARTMENT OF EDUCATIONAL TESTING

CURRICULUM REFERENCED FINAL

ENGLISH - SECONDARY I

1985 - 1986

PART I	PART II	PART III															
1 - 20	21 - 29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
School-developed portion - objectives drawn from categories B and C of High School Curriculum Objectives	School-developed portion - objectives drawn from category E of High School Curriculum Objectives Grade 9	B.4 Types of logical order	B.4	D.2 Evaluating written material	D.5 Disting. bet. clear & unclear material	D.6 Disting. bet. related & unrel. details	D.2 Evaluating written material	D.3 Writer's bias or prejudice	C.13 Identifying points of view	D.7 Propaganda techniques	D.8 Kinds of stereotyping	C.14 Fact/opinion	C.10	C.10	C.10 Figurative language	C.10	C.10

```
 993 SEC ENG I          TECR5005              11/07/86
PERCENTAGE OF CORRECT ANSWERS PER ITEM
NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY **

SCHL     1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 TOTAL

 1040   80 63 70 67 73 79 70 70 75 76 70 79 69 84 52 82 67 68 79 70 79 62 67 69 73 73 76 79 73 31 29 26 51 51 62 35 60 82 50 43 67 47 50 37 70 64
 1110   72 67 80 46 92 27 81 73 56 91 70 92 55 43 57 51 36 26 58 65 41 51 91 88 95 38 56 87 85 51 28 45 42 60 65 43 80 76 55 56 86 55 50 41 72 61
 DISA   76 65 75 56 82 53 75 72 66 83 70 85 62 64 54 67 51 47 69 67 60 56 79 79 83 56 66 83 79 41 29 35 46 55 63 39 70 79 52 50 76 51 50 39 71 63

 1250   71 75 53 70 48 69 54 55 25 47 55 59 44 58 60 46 58 40 53 64 69 65 47 68 68 71 73 56 52 43 33 34 41 68 59 42 76 85 58 33 75 56 42 34 71 56
 1100   90 61 88 70 94 62 57 86 54 73 88 92 84 85 37 64 80 72 77 52 64 20 50 40 70 33 65 85 50 41 40 36 45 46 62 45 77 81 69 52 77 60 72 49 73 64
 DISB   76 72 62 70 60 68 55 63 32 54 63 67 54 65 54 51 63 48 59 61 68 54 48 60 69 61 71 63 51 42 35 34 42 63 60 43 76 84 61 38 76 57 49 38 71 58

 1060   69 67 58 23 56 63 73 69 58 54 50 71 58 67 60  8 56 54 73 54 43 54 47 56 69 45 65 65 76 28 32 34 45 54 52 52 60 76 36 34 60 50 34 26 65 53
 1120   74 96 81 74 81 70 77 37 77 81 74 62 77 88 81 77 96 85 77 22 48 51 51 33 88 66 77 29 88 51  7 18 48 44 66 33 85 88 37 22 81 44 44 40 62 62
 1160   56 75 76 59 46 56 71 60 59 78 63 75 60 65 56 71 66 71 54 60 51 63 59 91 54 64 88 61 32 54 43 45 50 66 72 41 81 88 54 48 81 48 38 44 85 62
 DISC   62 76 72 52 54 60 73 59 61 72 61 72 62 69 61 55 68 69 63 52 48 59 54 73 63 59 80 57 53 46 35 38 48 59 66 43 76 85 66 40 76 48 38 39 76 59

 1050   30 42 78 51 66 78 54 78 15 66 45 51 30 30 66 63 54 42 66 54 45 90 87 21 21 39 78 57 27 51 30 33 39 66 78 27 66 84 36 30 75 36 51 42 78 52
 1070   28 86 85 95 60 47 69 72 74 47 77 75 77 67 61 81 75 62 44 28 52 59 47 25 29 71 49 24 39 44 32 32 50 64 65 43 80 86 63 47 83 48 27 41 71 57
 DISD   28 79 84 88 61 52 67 73 65 50 72 71 69 61 62 78 71 59 47 32 51 64 54 24 28 66 54 29 37 45 31 32 48 65 67 41 78 85 59 44 82 46 30 41 72 57

 1080   79 78 23 91 91 74 91 37 65 38 88 57 72 39 70 64 80 62 93 66 75 71 70 80 80 46 51 34 18 42 28 29 50 65 72 40 79 83 62 41 81 53 45 38 74 61
 1190   47 41 58 70 64 69 37 84 45 56  8 20 81 80 32 40 21 48 74 36 32 79 89 50 35 28 43 46 43 30 29 37 37 54 62 30 79 78 52 31 64 32 26 21 69 49
 1200   80 69 84 60 17 64 85 79 69 69 38 19 23 53 73 53 64 51 37 45 53 72 75 70 55 50 21 27 45 42 31 37 38 62 60 47 82 89 53 36 75 34 28 29 65 53
 1210   38 76 59 40 79 74 58 65 70 61 56 56 49 55 58 63 71 62 66 58 66 72 80 88 65 83 51 73 73 43 33 31 34 58 58 29 71 80 38 39 71 36 36 28 64 58
 1240   53 37 52 79 47 69 23 37 40 18 21 44 44 26 26 22 53 34 43 53 54 38 17 62 53 50 68 89 87 43 29 39 44 67 65 35 79 82 45 51 82 72 50 32 79 50
 DISE   59 64 52 67 66 71 63 58 60 49 50 44 55 50 55 52 63 54 66 54 60 68 68 74 61 55 48 54 52 41 30 33 41 61 64 36 77 82 50 40 75 45 38 31 70 56

 DISA   76 65 75 56 82 53 75 72 66 83 70 85 62 64 54 67 51 47 69 67 60 56 79 79 83 56 66 83 79 41 29 35 46 55 63 39 70 79 52 50 76 51 50 39 71 63
 DISB   76 72 62 70 60 68 55 63 32 54 63 67 54 65 54 51 63 48 59 61 68 54 48 60 69 61 71 63 51 42 35 34 42 63 60 43 76 84 61 38 76 57 49 38 71 58
 DISC   62 76 72 52 54 60 73 59 61 72 61 72 62 69 61 55 68 69 63 52 48 59 54 73 63 59 80 57 53 46 35 38 48 59 66 43 76 85 66 40 76 48 38 39 76 59
 DISD   28 79 84 88 61 52 67 73 65 50 72 71 69 61 62 78 71 59 47 32 51 64 54 24 28 66 54 29 37 45 31 32 48 65 67 41 78 85 59 44 82 46 30 41 72 57
 DISE   59 64 52 67 66 71 63 58 60 49 50 44 55 50 55 52 63 54 66 54 60 68 68 74 61 55 48 54 52 41 30 33 41 61 64 36 77 82 50 40 75 45 38 31 70 56
 STOT   60 70 64 68 64 64 64 63 56 57 60 61 59 58 56 58 63 54 62 54 59 62 61 64 61 58 60 56 53 42 32 34 44 61 64 39 76 83 53 41 76 49 41 36 71 58
```

ENGLISH - SECONDARY II

INSTRUMENT AND POPULATION DESCRIPTION

This is a test comprised of forty-five multiple choice items measuring selected objectives in the curriculum strands of Literal, Interpretive, and Evaluative Comprehension, and Vocabulary. In addition, there is a writing portion that addresses the objectives in the curriculum strands of Writing/the Craft and Writing/Mechanics/Usage.

So that the test may be content valid for each high school, yet at the same time provide a measure of student performance system-wide, the test contains both school-developed and centrally-developed portions. The test is organized so that items 1-20 are school-developed and tap literal and interpretive objectives, items 21-30 are school-developed and address Vocabulary objectives, and items 31-45 are centrally-developed and measure literal comprehension objectives (2 items), interpretive comprehension objectives (7 items), and evaluative comprehension objectives (6 items). Since the school-developed items vary from school to school, only the centrally-developed items will be analyzed.

The population includes all high school students (with the exception of the exam schools) who took a Secondary II English course and for whom valid answer sheets were turned in.

SYSTEM STRENGTHS AND WEAKNESSES

Overall, students performed poorly on this test with a system-wide average score of 61%. Of the fifteen centrally-developed items there were seven which fewer than fifty percent of the students answered correctly. In literal comprehension students had difficulty with types of logical order (item #'s 31 and 32). In evaluative comprehension students were unable to identify a writer's bias or prejudice (item # 35). In interpretive comprehension students had difficulty with fact/opinion (item # 41) and with figurative language (item #'s 42, 44, and 45).

BOSTON PUBLIC SCHOOLS

DEPARTMENT OF EDUCATIONAL TESTING

CURRICULUM REFERENCED FINAL

ENGLISH - SECONDARY II

1985 - 1986

PART I	PART II	PART III	
1 - 20	21 - 30	31	B.4 Types of logical order
School-developed portion - objectives drawn from Categories B and C of High School Curriculum Objectives	School-developed portion - objectives drawn from category E of High School Curriculum Objectives Grade 10	32	B.4
		33	C.13. Identifying points of view
		34	D.2 Evaluating written material
		35	D.3 Writer's bias or prejudice
		36	D.6 Disting. bet. related & unrel. details
		37	D.7 Propaganda techniques
		38	D.7
		39	D.8 Kinds of stereotyping
		40	C.14 Fact/opinion
		41	C.14
		42	C.10 Figurative language
		43	C.10
		44	C.10
		45	C.10

```
 994 SEC ENG II          TECR5005            11/07/86
PERCENTAGE OF CORRECT ANSWERS PER ITEM
NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY **

SCHL    1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 TOTAL

1340   72 81 69 66 86 78 66 61 63 38 64 67 60 70 64 64 58 80 56 76 76 72 80 83 56 58 69 55 76 60 41 23 64 69 36 67 58 60 75 70 43 69 75 50 46 64
1110   47 69 65 34 59 51 75 68 58 52 33 79 48 58 34 62 37 62 81 61 88 73 66 68 47 81 91 45 91 43 51 26 68 77 44 63 65 63 70 73 26 62 75 34 44 59
DISA   59 75 67 49 72 64 70 64 60 45 48 73 54 64 48 63 47 70 70 68 83 72 72 75 51 70 81 50 84 51 46 24 66 73 40 65 62 62 72 72 34 65 75 42 45 61

1250   66 68 67 70 63 59 66 74 46 62 57 72 84 80 71 49 53 48 67 81 57 77 67 67 61 75 52 65 53 46 47 25 71 78 51 68 57 60 65 74 37 52 76 36 46 61
1100   85 33 62 90 82 54 68 26 54 73 61 76 49 45 18 44 76 60 86 26 56 41 73 77 40 21 64 46 80 70 46 20 68 69 38 61 45 61 57 70 30 48 74 36 30 55
2950    0 ** **  0 **  0  0  0  0 **  0 ** **  0 ** ** **  0 **  0 ** ** ** ** ** ** ** ** ** ** **  0 ** **  0 ** **  0 **  0 ** ** **  0 ** 66
DISB   73 55 65 77 71 57 66 55 49 67 58 74 71 66 51 47 62 52 75 60 56 63 70 71 53 54 56 58 63 55 47 23 70 75 46 65 52 60 62 72 35 51 76 36 40 59

1063   79 58 54 68 54 47 31 25 39 66 37 47 47 64 52 58 70 83 58 27 60 89 45 37 58 56 33 54 33 33 52 39 75 64 39 52 54 50 39 52 43 52 66 39 22 51
1120   78 85 76 83 88 56 60 88 94 97 83 71 66 45 85 61 88 66 64 56 85 78 84 56 63 43 60 52 74 57 28 18 57 61 26 54 49 67 52 60 33 42 70 29 35 63
1160   83 81 89 93 86 87 64 91 93 74 87 84 69 77 80 84 92 86 81 85 66 73 90 78 74 86 71 54 65 73 50 30 74 80 42 69 61 73 84 81 38 66 71 38 49 74
DISC   80 77 76 84 79 67 63 74 81 80 74 71 63 62 75 70 86 78 70 61 71 79 77 60 66 64 58 53 60 58 43 28 68 70 36 60 55 65 62 67 38 54 69 35 38 65

1050   56 67 70 65 79 80 84 54 75 79 66 55 73 67 22 41 56 57 64 42 46 36 61 58 59 37 41 58 43 55 60 25 61 64 29 57 60 69 62 75 21 32 65 39 50 56
1070   68 62 77 55 62 61 75 77 88 63 86 75 84 75 39 80 85 94 73 60 91 65 92 45 72 93 95 93 91 94 53 22 65 72 40 64 56 63 62 74 36 46 67 28 42 68
DISD   63 64 74 59 69 69 79 67 83 69 78 67 80 72 32 64 73 79 69 53 73 53 79 50 67 71 73 79 72 78 55 23 63 69 36 61 58 65 62 74 30 40 66 32 45 63

1080   32 88 81 36 66 51 40 65 40 85 28 56 46 50 45 46 62 50 41 36 68 96 92 65 47 91 78 87 36 65 53 31 72 80 41 68 56 80 81 73 36 68 77 50 41 59
1190   68 73 78 62 73 57 69 64 63 32 63 25 64 87 39 26 50 84 47 62 84 89 47 84 81 80 73 96 80 79 47 21 61 69 28 56 47 67 45 65 22 33 66 27 36 59
1200   56 67 52 78 88 77 61 57 77 42 89 72 57 75 42 50 63 21 70 36 57 51 53 88 32 11 31 31 27 29 62 24 71 64 40 63 52 64 78 73 36 41 71 38 39 55
1210   60 71 61 63 60 61 68 68 63 46 66 75 75 71 44 72 69 57 70 64 82 71 70 69 69 77 43 61 41 55 42 26 61 60 37 54 54 56 64 59 22 33 62 30 28 58
1240   48 90 87 90 88 14 30 52 80 40 48 45 85 77 61 40 85 75 80 61 62 64 55 60 72 ** 90 92 98 65 55 17 70 90 41 70 57 77 84 81 30 82 72 51 44 66
DISE   55 76 70 65 73 55 57 62 64 47 61 55 66 73 45 48 65 58 61 53 73 74 63 74 62 71 60 72 55 59 51 24 66 70 36 61 53 67 68 68 28 47 69 37 36 59

DISA   59 75 67 49 72 64 70 64 60 45 48 73 54 64 48 63 47 70 70 68 83 72 72 75 51 70 81 50 84 51 46 24 66 73 40 65 62 62 72 72 34 65 75 42 45 61
DISB   73 55 65 77 71 57 66 55 49 67 58 74 71 66 51 47 62 52 75 60 56 63 70 71 53 54 56 58 63 55 47 23 70 75 46 65 52 60 62 72 35 51 76 36 40 59
DISC   80 77 76 84 79 67 63 74 81 80 74 71 63 62 75 70 86 78 70 61 71 79 77 60 66 64 58 53 60 58 43 28 68 70 36 60 55 65 62 67 38 54 69 35 38 65
DISD   63 64 74 59 69 69 79 67 83 69 78 67 80 72 32 64 73 79 69 53 73 53 79 50 67 71 73 79 72 78 55 23 63 69 36 61 58 65 62 74 30 40 66 32 45 63
DISE   55 76 70 65 73 55 57 62 64 47 61 55 66 73 45 48 65 58 61 53 73 74 63 74 62 71 60 72 55 59 51 24 66 70 36 61 53 67 68 68 28 47 69 37 36 59
STOT   64 71 71 67 73 61 65 64 68 59 64 65 67 69 49 56 67 66 67 57 71 69 70 67 61 67 64 66 63 61 49 24 66 71 38 62 55 65 65 70 31 49 70 36 40 61
```

ENGLISH - SECONDARY III

INSTRUMENT AND POPULATION DESCRIPTION

This is a test comprised of fifty multiple choice items measuring selected objectives in the curriculum strands of Literal, Interpretive, and Evaluative Comprehension, and Vocabulary. In addition, there is a writing portion that addresses the objectives in the curriculum strands of Writing/the Craft and Writing/Mechanics/Usage.

So that the test may be content valid for each high school, yet at the same time provide a measure of student performance system-wide, the test contains both school-developed and centrally-developed portions. The test is organized so that items 1-20 are school-developed and tap literal and interpretive objectives, items 21-30 are school-developed and address vocabulary objectives, and items 31-50 are centrally-developed and measure literal comprehension objectives (2 items), interpretive comprehension objectives (10 items), and evaluative comprehension objectives (8 items). Since the school-developed items vary from school to school, only the centrally-developed items will be analyzed.

The population includes all high school students (with the exception of the exam schools) who took a Secondary III English course and for whom valid answer sheets were submitted.

SYSTEM STRENGTHS AND WEAKNESSES

Overall, students performed poorly on this test with a system-wide average score of 60%. Of the literal comprehension items students had difficulty with types of logical order (item # 31). Of the ten interpretive comprehension items there were six items which fewer than fifty percent of the students answered correctly. These items addressed fact/opinion (items #'s 38 and 39) and figurative language (item #'s 44, 46, 47, and 48).

BOSTON PUBLIC SCHOOLS

DEPARTMENT OF EDUCATIONAL TESTING

CURRICULUM REFERENCED FINAL

1985 - 1986

ENGLISH - SECONDARY III

PART I	PART II	PART III		
1 - 20	21 - 30			
School-developed portion - objectives drawn from categories B and C of High School Curriculum Objectives	School-developed portion - objectives drawn from category E of High School Curriculum Objectives Grade 11			
		31	B.4	Types of logical order
		32	B.4	
		33	D.2	Evaluating written material
		34	D.5	Disting. bet. clear & unclear material
		35	D.6	Disting. bet. related & unrel. details
		36	D.2	Evaluating written material
		37	C.13	Identifying points of view
		38	C.14	Fact/opinion
		39	C.14	
		40	D.7	Propaganda techniques
		41	D.8	Kinds of stereotyping
		42	D.7	Propaganda techniques
		43	D.7	
		44	C.10	Figurative language
		45	C.10	
		46	C.10	
		47	C.10	
		48	C.10	
		49	C.10	
		50	C.10	

```
 995 SEC ENG III        TLCR5005            11/07/86
PERCENTAGE OF CORRECT ANSWERS PER ITEM
NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY **

SCHL    1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 TOTAL

 1340  82 77 68 72 40 86 73 53 86 69 84 81 63 57 80 64 82 75 81 59 57 44 71 80 47 89 92 47 84 22 50 57 77 69 77 69 46 36 36 67 61 80 78 39 61 30 61 43 68 53 65
 1110  83 69 70 40 83 48 23 91 76 58 57 83 73 55 79 61 76 66 91 76 54  0 68 77 91 90 74 49 85 50 42 54 71 64 78 82 61 35 46 64 57 73 74 50 72 38 45 25 55 50 61
 DISA  83 72 69 54 64 64 45 75 80 63 68 82 68 56 79 62 79 70 87 68 55 19 69 78 72 89 81 48 84 38 45 55 74 66 77 76 54 36 42 65 59 76 76 45 67 35 52 33 61 51 63

 1250  86 68 72 45 66 68 78 57 61 52 78 31 71 59 40 65 51 35 41 65 68 75 69 67 68 37 63 45 61 67 45 54 73 59 72 77 64 24 36 67 62 65 62 52 63 33 46 35 61 48 58
 1100  79 52 63 72 76 32 71 72 73 46 51 63 49 38 42 54 78 53 80 56 42 46 50 74 86 59 72 59 41 29 48 37 72 60 69 74 60 19 27 65 49 88 77 45 52 40 38 39 47 44 56
 DISB  83 61 68 57 71 52 75 64 66 49 66 46 61 50 41 60 63 43 59 61 57 62 61 70 76 47 67 52 52 50 46 46 73 59 71 76 62 22 31 66 56 76 69 49 58 36 42 37 55 46 57

 1360  21 31 78 36 36 84 31 63 47 57 15 26 63 36 36 21 21 31 63 21 10 26 10 21 15 26 10 57 42 36 52 47 31 63 52 52 47 42 57 52 36 42 15 21  5 21 31  5 10 10 35
 1120  87 91 83 45 64 67 74 87 79 82 66 53 43 69 54 72 58 37 41 46 72 66 48 43 66 61 75 33 72 62 37 45 75 59 62 77 64 27 25 53 51 66 54 35 58 38 37 37 61 37 53
 1160  95 40 85 72 47 70 57 87 90 67 65 67 72 67 47 77 65 60 85 57 62 72 75 70 72 75 40 72 82 75 47 60 72 90 87 90 62 20 22 77 75 75 87 57 60 45 52 45 70 62 66
 DISC  79 65 83 52 54 71 61 83 77 73 57 53 56 63 49 66 54 43 59 46 59 61 51 48 60 60 53 50 71 62 42 50 67 70 69 77 61 27 29 61 57 65 59 40 50 38 41 34 56 41 57

 1350  78 76 64 54 86 43 63 45 68 59 76 70 73 45 40 64 76 56 80 53 64 76 77 54 54 69 39 64 55 72 52 39 69 71 68 75 54 23 28 54 57 74 67 47 52 40 47 44 58 59 57
 1070  71 52 63 68 76 70 73 67 68 67 72 35 62 47 59 54 49 45 37 33 36 79 32 79 44 58 35 46 59 41 43 50 75 63 72 79 62 35 30 63 58 77 65 50 66 43 44 34 61 66 56
 DISD  74 62 64 62 80 59 69 58 68 64 74 49 67 46 51 58 60 50 55 41 48 78 50 68 48 63 36 53 57 54 46 46 72 66 70 78 59 30 29 59 57 76 66 49 60 42 46 38 60 63 58

 1380  87 82 73 65 59 64 51 81 46 52 86 82 62 73 69 80 48 85 69 80 56 62 64 68 85 63 67 78 64 64 39 45 79 69 70 72 60 27 35 70 65 86 81 44 61 46 42 46 50 44 64
 1190  70 52 97 61 41 58 41 70 82  8 55 23 47 52 67 55 52 44 41 97 76 88 88 70 70 41 52 73 70 26 44 32 58 50 73 82 58 20 38 64 61 67 79 61 67 17 23 26 52 55 56
 1200  77 18 55 55 61 38 62  4 45 66 41 68 81 51 34 43 59 18 51 31 75 61 59 80 81 88 72 88 80 31 37 59 66 56 73 68 68 27 43 69 63 77 88 52 70 44 37 47 48 47 55
 1210  61 78 55 83 71 78 48 65 71 64 63 57 48 64 51 67 44 39 73 58 64 69 54 57 36 76 73 64 63 58 44 53 69 61 47 66 55 51 57 65 48 72 34 57 61 47 60 52 50 65 57
 1240  ** 98 84 87 91 61 95 67 97 78 98 82 ** 94 89 91 98 84 54 82 98 ** ** ** 94 91 91 91 89 45 50 57 79 72 90 95 79 31 47 72 79 91 90 58 78 58 69 41 65 76 80
 DISE  80 68 70 72 67 61 61 57 66 59 71 67 69 69 61 69 60 56 60 67 72 74 70 74 73 75 73 79 73 48 43 51 72 63 70 76 64 33 45 68 63 80 73 53 67 46 49 45 53 57 64

 DISA  83 72 69 54 64 64 45 75 80 63 68 82 68 56 79 62 79 70 87 68 55 19 69 78 72 89 81 48 84 38 45 55 74 66 77 76 54 36 42 65 59 76 76 45 67 35 52 33 61 51 63
 DISB  83 61 68 57 71 52 75 64 66 49 66 46 61 50 41 60 63 43 59 61 57 62 61 70 76 47 67 52 52 50 46 46 73 59 71 76 62 22 31 66 56 76 69 49 58 36 42 37 55 46 57
 DISC  79 65 83 52 54 71 61 83 77 73 57 53 56 63 49 66 54 43 59 46 59 61 51 48 60 60 53 50 71 62 42 50 67 70 69 77 61 27 29 61 57 65 59 40 50 38 41 34 56 41 57
 DISD  74 62 64 62 80 59 69 58 68 64 74 49 67 46 51 58 60 50 55 41 48 78 50 68 48 63 36 53 57 54 46 46 72 66 70 78 59 30 29 59 57 76 66 49 60 42 46 38 60 63 58
 DISE  80 68 70 72 67 61 61 57 66 59 71 67 69 69 61 69 60 56 60 67 72 74 70 74 73 75 73 79 73 48 43 51 72 63 70 76 64 33 45 68 63 80 73 53 67 46 49 45 53 57 64
 STOT  80 66 69 62 69 60 63 64 70 60 69 60 65 58 57 64 63 53 63 58 60 62 62 70 67 67 63 60 67 50 44 50 72 64 71 76 61 30 36 65 59 76 70 49 62 40 47 39 56 54 60
```

ENGLISH - SECONDARY IV

INSTRUMENT AND POPULATION DESCRIPTION

This is a test comprised of fifty multiple choice items measuring selected objectives in the curriculum strands of Literal, Interpretive, and Evaluative Comprehension, and Vocabulary. In addition, there is a writing portion that addresses the objectives in the curriculum strands of Writing/the Craft and Writing/Mechanics/Usage.

So that the test may be content valid for each high school, yet at the same time provide a measure of student performance system-wide, the test contains both school-developed and centrally developed portions. The test is organized so that items 1-20 are school-developed and tap literal and interpretive objectives, items 21-30 are school-developed and address Vocabulary objectives, and items 31-50 are centrally-developed and measure literal comprehension objectives (2 items), interpretive comprehension objectives (10 items), and evaluative comprehension objectives (8 items). Since the school-developed items vary from school to school, only the centrally-developed items will be analyzed.

The population includes all high school students (with the exception of the exam schools) who took a Secondary English IV course and for whom valid answer sheets were submitted.

SYSTEM STRENGTHS AND WEAKNESSES

Overall, students performed poorly on this test with a system-wide average score of 63%. Of the twenty centrally-developed items there were four items which fewer than fifty percent of the students answered correctly. In literal comprehension students had difficulty with logical order (item # 32). In interpretive comprehension students are not mastering the objectives of fact/opinion (item # 39) and figurative language (item #'s 45 and 48).

BOSTON PUBLIC SCHOOLS

DEPARTMENT OF EDUCATIONAL TESTING

CURRICULUM REFERENCED FINAL

ENGLISH - SECONDARY I

1985 - 1986

PART	Items	Objective	Description
PART I	1 - 20		School-developed portion - objectives drawn from categories B and C of High School Curriculum Objectives
PART II	21 - 30		School-developed portion - objectives drawn from category E of High School Curriculum Objectives Grade 12
PART III	31	B.4	Types of logical order
	32	B.4	Types of logical order
	33	D.2	Evaluating written material
	34	D.5	Disting. bet. clear & unclear material
	35	D.2	Evaluating written material
	36	D.5	Disting. bet. clear & unclear material
	37	C.13	Identifying points of view
	38	C.14	Fact/opinion
	39	C.14	Fact/opinion
	40	D.7	Propaganda techniques
	41	D.7	Propaganda techniques
	42	D.8	Types of stereotyping
	43	D.8	Types of stereotyping
	44	C.10	Figurative language
	45	C.10	Figurative language
	46	C.10	Figurative language
	47	C.10	Figurative language
	48	C.10	Figurative language
	49	C.10	Figurative language
	50	C.10	Figurative language

```
 996 SEC ENG IV          TECR5005            11/07/86
PERCENTAGE OF CORRECT ANSWERS PER ITEM
NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY **

SCHL     1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40   41 42 43 44 45 46 47 48 49 50 TOTAL

 1040   68 90 75 61 56 59 54 61 72 79 65 88 40 84 70 79 75 86 75 50 56 77 72 68 45 86 61 77 59 61 75 61 77 68 79 63 93 59 43 68   70 79 88 95 38 75 72 52 70 72 67
 1110   80 85 91 73 68 57 59 71 50 71 56 56 56 70 77 91 87 85 47 84 77 47 71 78 80 89 56 91 82 89 70 63 66 66 68 68 77 64 50 57   63 92 96 73 47 59 73 33 73 64 70
 DISA   75 88 84 68 63 58 57 67 60 75 60 70 49 76 74 86 82 86 59 69 68 60 72 74 65 88 58 85 72 77 72 62 71 67 73 66 84 62 47 62   66 87 93 83 43 66 73 41 72 68 69

 1250   37 58 55 51 91 83 36  0 96 79 79 73 50 59 54 71 57 50 73 74 79 89 31 67 84 35 48 47 89 93 60 43 65 55 74 73 80 69 41 41   56 82 88 49 40 58 73 39 63 61 62
 1100   86 85 44 65 65 54 85 24 42 44 50 64 38 39 71 65 49 81 68 68 52 89 37 61 44 91 91 82 39 52 60 47 60 58 53 57 78 51 47 47   65 81 83 35 40 48 55 32 67 48 57
 DISB   62 72 49 59 78 68 62 13 68 61 64 68 44 49 63 68 53 66 70 71 65 89 34 64 63 64 71 65 62 71 60 45 62 57 63 65 79 60 44 45   60 81 85 42 40 53 63 35 65 54 60

 1060   ** ** **  0 ** **  0  0  0 **  0 ** ** ** ** ** **  0  0  0 ** ** **  0 ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** **    0 ** ** **  0 **  0  0 **  0 72
 1120   64 52 52 40 75 78 40 82 80 73 80 78 56 78 89 71 56 80 85 40 68 82 73 70 35 26 80 17 59 61 50 14 63 66 54 66 71 43 29 54   52 73 73 38 38 43 61 38 57 50 59
 1160   35 64 71 71 57 92 71 57 57 64 92 42 64 64 42 50 35 71 42 28 64 78 57 78 71 57 64 71 71 78 42 71 85 42 71 71 78 64 42 64   64 92 92 35 85 71 85 64 71 78 65
 DISC   59 55 56 45 72 81 45 76 75 72 81 72 58 76 80 68 52 77 76 37 68 81 70 70 43 33 77 29 62 65 50 26 68 62 58 68 73 48 33 56   54 77 77 38 47 50 65 43 61 55 60

 1050   62 41 32 43 49 24 52 37 73 83 66 77 41 49 58 67 22 60 58 52 75 67 47 64 58 39 66 60 41 66 62 39 77 66 52 67 64 49 32 43   60 66 75 60 43 54 50 49 79 47 55
 1070   84 77 80 73 77 58 66 86 61 69 82 65 68 77 62 68 80 56 77 80 71 80 80 88 73 64 75 71 68 75 70 46 70 55 57 59 77 43 29 48   66 84 84 64 44 69 66 37 82 60 68
 DISD   78 67 67 65 69 49 62 73 64 73 77 68 61 70 61 68 64 57 72 72 72 76 71 81 69 58 72 68 61 73 68 44 72 58 56 61 73 44 30 46   64 79 81 63 43 65 62 40 81 57 64

 1190   86 81 66 63 59 78 79 47 36 51 28 31 52 50 39 35 47 62 40 71 77 58 72 64 60 51 68 62 56 59 62 52 55 48 50 77 74 52 37 54   54 77 77 44 36 55 68 43 71 55 57
 1200   80 62 58 92 75 37 54 87 47 77 22 42 64 78 50 74 82 12 30 87 74 87 81 58 35 97 75 78 65 58 67 52 72 72 57 64 75 61 27 55   72 91 87 81 44 68 71 44 74 65 64
 1210   76 70 84 74 66 73 43 40 63 49 63 25 49 69 78 40 40 39 57 21 32 74 70 47 50 45 29 45 42 40 63 40 76 64 56 66 59 52 32 47   57 85 88 39 43 54 66 45 66 54 55
 1240   78 86 94 94 94 84 80 88 70 88 92 82 82 84 80 96 80 68 86 92 98 80 64 60 80 66 84 66 56 80 86 58 82 60 78 80 96 64 50 72   72 96 96 88 62 66 78 50 90 68 78
 DISE   80 74 74 80 72 67 63 63 52 64 48 42 60 69 60 58 61 44 50 66 68 74 72 57 55 64 63 62 55 58 68 50 70 61 58 71 74 56 35 56   63 86 86 61 45 60 70 45 74 60 62

 DISA   75 88 84 68 63 58 57 67 60 75 60 70 49 76 74 86 82 86 59 69 68 60 72 74 65 88 58 85 72 77 72 62 71 67 73 66 84 62 47 62   66 87 93 83 43 66 73 41 72 68 69
 DISB   62 72 49 59 78 68 62 13 68 61 64 68 44 49 63 68 53 66 70 71 65 89 34 64 63 64 71 65 62 71 60 45 62 57 63 65 79 60 44 45   60 81 85 42 40 53 63 35 65 54 60
 DISC   59 55 56 45 72 81 45 76 75 72 81 72 58 76 80 68 52 77 76 37 68 81 70 70 43 33 77 29 62 65 50 26 68 62 58 68 73 48 33 56   54 77 77 38 47 50 65 43 61 55 60
 DISD   78 67 67 65 69 49 62 73 64 73 77 68 61 70 61 68 64 57 72 72 72 76 71 81 69 58 72 68 61 73 68 44 72 58 56 61 73 44 30 46   64 79 81 63 43 65 62 40 81 57 64
 DISE   80 74 74 80 72 67 63 63 52 64 48 42 60 69 60 58 61 44 50 66 68 74 72 57 55 64 63 62 55 58 68 50 70 61 58 71 74 56 35 56   63 86 86 61 45 60 70 45 74 60 62
 STOT   73 72 65 66 72 63 60 53 62 67 63 61 54 65 64 67 61 60 64 66 68 77 61 68 60 63 68 64 61 68 65 47 68 60 61 66 76 54 38 51   62 83 85 57 43 59 66 40 72 58 63
```

MATHEMATICS

ELEMENTARY AND MIDDLE

MATHEMATICS - LEVEL 1

INSTRUMENT AND POPULATION DESCRIPTION

The test is a fifty item multiple choice test measuring selected circled objectives in the curriculum strands of Numbers/Numeration (10 items), Fractions and Money (10 items), Measurement/Geometry (10 items), and Computation (20 items).

The population includes all students enrolled in Grade 1 who were administered an on-level test and for whom valid scores were reported.

SYSTEM STRENGTHS AND WEAKNESSES

Because of the young age of the students taking these tests they responded by writing directly in the test booklet, rather than on separate answer sheets. Teachers hand-scored the booklets and recorded the students' total scores on data collection sheets, thus individual item data for analysis are not available. Overall, stduents performed only fairly on this test with a system-wide average score of 74%. On both the Numbers/Numeration and Fractions/Money subtests the average score was 14 out of a possible 20 points. On the Measurement/Geometry subtest the average score was 16 out of a possible 20 points. On the Computation subtest the average score was 30 out of a possible 40 points. These data suggest that there is no one area in which students are having difficulty, instead it is with selected objectives in each of the strands.

BOSTON PUBLIC SCHOOLS
CURRICULUM REFERENCE TEST JUNE 1986 AVERAGE SCORE REPORT
LEVEL 1

SCHOOL CODE	SCHOOL NAME	MATHEMATICS				
		NUMB./NUMER. (OUT OF 10)	FRAC./ MONEY (OUT OF 10)	MEAS./ GEOM. (OUT OF 10)	COMPUT. (OUT OF 20)	// //
4160	GARDNER ELEMENTARY	08	08	09	16	/
4170	GARFIELD ELEMENTARY	06	06	07	13	/
4173	WINSHIP ELEMENTARY	07	07	07	15	/
4220	HAMILTON ELEMENTARY	07	06	08	14	/
4221	BALDWIN ELEMENTARY	08	08	09	17	/
4570	TOBIN ELEMENTARY	07	07	08	15	/
4571	FARRAGUT ELEMENTARY	08	08	08	13	/
4010	AGASSIZ ELEMENTARY	07	07	08	15	/
4240	ELLIS ELEMENTARY	08	07	08	15	/
4241	HIGGINSON ELEMENTARY	07	08	09	17	/
4270	J KENNEDY ELEMENTARY	08	07	08	17	/
4310	LONGFELLOW ELEMENTARY	06	06	08	14	/
4311	MANNING ELEMENTARY	08	08	09	17	/
4370	MENDELL ELEMENTARY	08	07	08	16	/
4371	FULLER ELEMENTARY	06	06	07	12	/
4430	PARKMAN ELEMENTARY	09	09	09	18	/
DISA		07	07	08	15	/
4030	BEETHOVEN ELEMENTARY	08	08	08	16	/
4031	KILMER ELEMENTARY	08	07	07	16	/
4081	BATES ELEMENTARY	07	08	08	14	/
4082	MOZART ELEMENTARY	07	05	07	15	/
4290	LEE ELEMENTARY	07	06	07	15	/
4560	SUMNER ELEMENTARY	07	07	08	15	/
4561	PHILBRICK ELEMENTARY	07	07	07	15	/

BOSTON PUBLIC SCHOOLS
CURRICULUM REFERENCE TEST JUNE 1986 AVERAGE SCORE REPORT
LEVEL 1

SCHOOL CODE	SCHOOL NAME	MATHEMATICS NUMB./NUMER. (OUT OF 10)	MATHEMATICS FRAC./ MONEY (OUT OF 10)	MATHEMATICS MEAS./ GEOM. (OUT OF 10)	MATHEMATICS COMPUT. (OUT OF 20)	// //
4690	MATTAHUNT ELEMENTARY	07	07	08	14	/
4070	CHITTICK ELEMENTARY	08	08	08	17	/
4080	CONLEY ELEMENTARY	07	06	07	14	/
4151	TAYLOR ELEMENTARY	06	07	08	14	/
4192	F ROOSEVELT ELEMENTARY	08	08	08	14	/
4200	GREW ELEMENTARY	09	08	09	16	/
4201	CHANNING ELEMENTARY	08	07	08	15	/
4670	P A SHAW ELEMENTARY	07	07	08	15	/
DISB		07	07	08	15	/
4051	DICKERMAN ELEMENTARY	07	06	07	15	/
4130	S GREENWOOD ELEMENTARY	07	07	08	15	/
4131	ENDICOTT ELEMENTARY	07	07	07	14	/
4140	EVERETT ELEMENTARY	07	07	08	15	/
4150	FIFIELD ELEMENTARY	07	07	08	16	/
4250	HOLLAND ELEMENTARY	07	06	07	13	/
4340	MARSHALL ELEMENTARY	07	08	08	15	/
4350	MATHER ELEMENTARY	06	07	08	14	/
4390	KENNY ELEMENTARY	08	08	09	17	/
4391	OHEARN ELEMENTARY	07	06	08	12	/
4400	MURPHY ELEMENTARY	06	07	06	12	/
4550	STONE ELEMENTARY	07	08	09	17	/
4022	PERKINS ELEMENTARY	08	08	08	15	/
4052	WINTHROP ELEMENTARY	09	08	09	18	/
4100	DEVER ELEMENTARY	08	08	08	15	/

BOSTON PUBLIC SCHOOLS
CURRICULUM REFERENCE TEST JUNE 1986 AVERAGE SCORE REPORT
LEVEL 1

SCHOOL CODE	SCHOOL NAME	MATHEMATICS NUMB./NUMER. (OUT OF 10)	FRAC./ MONEY (OUT OF 10)	MEAS./ GEOM. (OUT OF 10)	COMPUT. (OUT OF 20)	// //
4120	EMERSON ELEMENTARY	07	07	09	15	/
4121	MASON ELEMENTARY	07	07	08	16	/
4530	RUSSELL ELEMENTARY	08	07	08	16	/
4531	CLAP ELEMENTARY	07	07	08	15	/
4590	TYNAN ELEMENTARY	08	07	08	16	/
4592	PERRY ELEMENTARY	07	07	08	13	/
4630	CONDON ELEMENTARY	08	07	07	15	/
DISC		07	07	08	15	/
4280	KENT ELEMENTARY	08	08	09	17	/
4283	WPRESCOTT ELEMENTARY	08	08	08	16	/
4381	ELIOT ELEMENTARY	09	08	08	16	/
4640	BLACKSTONE ELEMENTARY	08	08	09	17	/
4650	QUINCY ELEMENTARY	08	08	09	16	/
4062	BRADLEY ELEMENTARY	08	08	09	17	/
4321	ALIGHIERI ELEMENTARY	07	09	08	18	/
4322	OTIS ELEMENTARY	08	08	09	17	/
4361	ADAMS ELEMENTARY	14	10	11	19	/
4541	P KENNEDY ELEMENTARY	08	08	08	16	/
4543	ODONNELL ELEMENTARY	08	08	09	18	/
DISD		08	08	09	17	/
4053	HERNANDEZ ELEMENTARY	07	07	08	14	/
4061	GUILD ELEMENTARY	09	09	09	18	/
4113	HALE ELEMENTARY	07	08	08	16	/
4210	HALEY ELEMENTARY	08	08	08	15	/

```
  12/24/86                                     BOSTON PUBLIC SCHOOLS
                              CURRICULUM REFERENCE TEST JUNE 1986 AVERAGE SCORE REPORT
                                                     LEVEL 1
                                 -------------------- MATHEMATICS ---------------------
SCHOOL           SCHOOL              NUMB./NUMER.      FRAC./         MEAS./         COMPUT.        //
CODE             NAME                (OUT OF 10)       MONEY          GEOM.         (OUT OF 20)     //
                                                    (OUT OF 10)    (OUT OF 10)

4230     HENNIGAN ELEMENTARY              07             06             08             14          /

4271     CURLEY ELEMENTARY                07             08             08             16          /

4360     MCKAY ELEMENTARY                 08             07             07             14          /

4410     OHRENBERGER ELEMENTARY           08             07             08             16          /

4580     TROTTER ELEMENTARY               07             07             08             15          /

4610     HORACE MANN SCHOOL               03             06             08             09          /

4620     JACKSON MANN ELEMENTARY          07             07             08             14          /

DISE                                      07             07             08             15          /

DISA                                      07             07             08             15          /

DISB                                      07             07             08             15          /

DISC                                      07             07             08             15          /

DISD                                      08             08             09             17          /

DISE                                      07             07             08             15          /

STOT     SYSTEM WIDE TOTALS               07             07             08             15          /
```

MATHEMATICS - LEVEL 2

INSTRUMENT AND POPULATION DESCRIPTION

The test is a forty-item multiple choice instrument measuring selected circled objectives in the curriculum strands of Numbers/Numeration (8 items), Computation (6 items), Decimals (4 items), Measurement (6 items), Geometry (6 items), Fractions (5 items), and Graphs (5 items). The test serves both as the final examination and the State Basic Skills Test for grade 2 students.

The population includes all students enrolled in grade 2 who were administered an on-level test and for whom valid scores were reported.

SYSTEM STRENGTHS AND WEAKNESSES

Because of the young age of the students taking these tests they responded by writing directly in the test booklet, rather than on separate answer sheets. Teachers hand-scored the booklets and recorded the students' total scores on data collection sheets, thus individual item data for analysis are not available. Overall, students performed only fairly well on this test with a system-wide average score of 69%. In both Numbers/Numeration and Computation the average scores were 13 out of a possible 20 points. In Decimals the average score was 5 out of a possible 10 points. In both Measurement and Geometry the average scores were 10 out of a possible 15 points. Out of a possible 13 points in both Fractions and Graphs the average scores were 10 and 8 respectively. These data suggest that there is no one strand in which students are consistently performing poorly, instead there are difficulties with individual objectives across all strands.

BOSTON PUBLIC SCHOOLS
CURRICULUM REFERENCE TEST JUNE 1986 AVERAGE SCORE REPORT
LEVEL 2

SCHOOL CODE	SCHOOL NAME	MATHEMATICS						
		NUMB./ NUMER. (OUT OF 8)	COMPUT. (OUT OF 6)	DEC. (OUT OF 4)	MEAS. (OUT OF 6)	GEOM. (OUT OF 6)	FRACTIONS (OUT OF 5)	GRAPHS (OUT OF 5)
4160	GARDNER ELEMENTARY	6	5	2	5	4	4	4
4170	GARFIELD ELEMENTARY	7	5	3	4	5	4	3
4173	WINSHIP ELEMENTARY	5	5	2	5	4	4	4
4220	HAMILTON ELEMENTARY	5	4	2	4	4	3	2
4221	BALDWIN ELEMENTARY	5	5	2	4	4	4	3
4570	TOBIN ELEMENTARY	6	5	2	4	5	4	3
4571	FARRAGUT ELEMENTARY	5	5	2	4	4	4	4
4010	AGASSIZ ELEMENTARY	5	5	2	5	4	4	3
4240	ELLIS ELEMENTARY	5	5	2	5	5	4	3
4241	HIGGINSON ELEMENTARY	6	5	2	5	5	4	3
4270	J KENNEDY ELEMENTARY	6	5	2	5	4	4	3
4310	LONGFELLOW ELEMENTARY	3	5	1	5	3	3	2
4311	MANNING ELEMENTARY	6	5	3	5	5	4	4
4370	MENDELL ELEMENTARY	4	5	2	5	3	4	3
4371	FULLER ELEMENTARY	5	5	2	4	4	4	3
4430	PARKMAN ELEMENTARY	7	5	3	5	5	4	4
DISA		5	5	2	4	4	4	3
4030	BEETHOVEN ELEMENTARY	5	5	2	4	5	4	3
4031	KILMER ELEMENTARY	7	5	2	4	5	4	4
4081	BATES ELEMENTARY	5	5	2	5	5	4	4
4082	MOZART ELEMENTARY	7	5	3	5	5	4	4
4290	LEE ELEMENTARY	6	6	3	5	4	4	4
4560	SUMNER ELEMENTARY	6	5	2	4	4	4	4
4561	PHILBRICK ELEMENTARY	6	5	3	5	4	4	4

BOSTON PUBLIC SCHOOLS
CURRICULUM REFERENCE TEST JUNE 1986 AVERAGE SCORE REPORT
LEVEL 2

SCHOOL CODE	SCHOOL NAME	MATHEMATICS NUMB./ NUMER. (OUT OF 8)	COMPUT. (OUT OF 6)	DEC. (OUT OF 4)	MEAS. (OUT OF 6)	GEOM. (OUT OF 6)	FRACTIONS (OUT OF 5)	GRAPHS (OUT OF 5)
4690	MATTAHUNT ELEMENTARY	4	5	2	4	4	3	3
4070	CHITTICK ELEMENTARY	7	5	3	5	5	4	4
4080	CONLEY ELEMENTARY	5	5	3	5	4	4	3
4151	TAYLOR ELEMENTARY	6	5	2	5	4	4	4
4192	F ROOSEVELT ELEMENTARY	6	5	2	5	4	4	4
4200	GREW ELEMENTARY	6	5	2	5	4	4	4
4201	CHANNING ELEMENTARY	5	5	2	5	4	4	4
4670	P A SHAW ELEMENTARY	4	5	2	5	3	4	3
DIST		6	5	2	5	4	4	3
4051	DICKERMAN ELEMENTARY	4	5	2	5	3	4	3
4130	S GREENWOOD ELEMENTARY	4	5	1	4	4	3	3
4131	ENDICOTT ELEMENTARY	5	5	2	5	4	4	3
4140	EVERETT ELEMENTARY	4	4	2	4	4	4	3
4150	FIFIELD ELEMENTARY	4	5	1	5	3	4	3
4250	HOLLAND ELEMENTARY	6	5	2	4	4	4	3
4340	MARSHALL ELEMENTARY	6	5	2	4	4	4	4
4350	MATHER ELEMENTARY	6	5	3	4	5	4	4
4390	KENNY ELEMENTARY	6	5	3	5	5	4	4
4391	OHEARN ELEMENTARY	5	5	2	4	4	4	3
4400	MURPHY ELEMENTARY	6	5	2	5	5	4	4
4550	STONE ELEMENTARY	6	5	3	5	5	4	4
4022	PERKINS ELEMENTARY	5	5	3	4	4	4	4
4052	WINTHROP ELEMENTARY	5	6	2	5	4	5	3
4100	DEVER ELEMENTARY	6	5	3	5	5	4	4

BOSTON PUBLIC SCHOOLS
CURRICULUM REFERENCE TEST JUNE 1986 AVERAGE SCORE REPORT
LEVEL 2

SCHOOL CODE	SCHOOL NAME	MATHEMATICS NUMB./ NUMER. (OUT OF 8)	COMPUT. (OUT OF 6)	DEC. (OUT OF 4)	MEAS. (OUT OF 6)	GEOM. (OUT OF 6)	FRACTIONS (OUT OF 5)	GRAPHS (OUT OF 5)
4120	EMERSON ELEMENTARY	6	5	3	5	4	4	3
4121	MASON ELEMENTARY	5	5	2	4	4	4	4
4530	RUSSELL ELEMENTARY	6	5	2	5	4	4	4
4531	CLAP ELEMENTARY	7	5	3	5	5	4	4
4590	TYNAN ELEMENTARY	7	5	3	5	5	4	4
4592	PERRY ELEMENTARY	7	5	2	5	5	4	4
4630	CONDON ELEMENTARY	6	5	2	5	5	4	4
DISC		6	5	2	4	4	4	3
4280	KENT ELEMENTARY	5	5	2	5	4	4	4
4283	WPRESCOTT ELEMENTARY	6	5	2	5	4	4	4
4381	ELIOT ELEMENTARY	4	5	2	5	4	4	3
4640	BLACKSTONE ELEMENTARY	5	5	2	4	4	4	4
4650	QUINCY ELEMENTARY	6	5	3	4	4	4	4
4062	BRADLEY ELEMENTARY	5	5	2	4	4	4	4
4321	ALIGHIERI ELEMENTARY	5	5	2	5	4	4	3
4322	OTIS ELEMENTARY	6	5	2	5	5	4	4
4361	ADAMS ELEMENTARY	3	6	1	5	3	3	3
4541	P KENNEDY ELEMENTARY	6	5	3	5	5	4	4
4543	ODONNELL ELEMENTARY	5	5	3	4	4	4	4
DISD		5	5	2	5	4	4	4
4053	HERNANDEZ ELEMENTARY	6	5	3	5	4	4	4
4061	GUILD ELEMENTARY	6	5	3	5	5	4	4
4113	HALE ELEMENTARY	4	5	2	4	5	4	4
4210	HALEY ELEMENTARY	6	5	3	5	5	4	4

BOSTON PUBLIC SCHOOLS
CURRICULUM REFERENCE TEST JUNE 1986 AVERAGE SCORE REPORT
MATHEMATICS AND SCIENCE LEVEL 2

SCHOOL CODE	SCHOOL NAME	MATHEMATICS NUMB./ NUMER. (OUT OF 8)	COMPUT. (OUT OF 6)	DEC. (OUT OF 4)	MEAS. (OUT OF 6)	GEOM. (OUT OF 6)	FRACTIONS (OUT OF 5)	GRAPHS (OUT OF 5)
4230	HENNIGAN ELEMENTARY	4	5	1	4	3	3	3
4271	CURLEY ELEMENTARY	5	5	3	5	4	4	4
4360	MCKAY ELEMENTARY	6	5	2	5	5	4	4
4410	OHRENBERGER ELEMENTARY	5	5	2	5	4	4	3
4580	TROTTER ELEMENTARY	5	5	2	4	4	4	4
4610	HORACE MANN SCHOOL	2	3	1	3	2	4	2
4620	JACKSON MANN ELEMENTARY	4	5	2	4	3	4	3
DISE		5	5	2	4	4	4	3
DISA		5	5	2	4	4	4	3
DISB		6	5	2	5	4	4	3
DISC		6	5	2	4	4	4	3
DISD		5	5	2	5	4	4	4
DISF		5	5	2	4	4	4	3
STOT	SYSTEM WIDE TOTALS	5	5	2	4	4	4	3

SYSTEM SUMMARY ANALYSIS

MATHEMATICS

GRADES 3-8

DESCRIPTION OF INSTRUMENTS

Each test for Grades 3-7 is a forty-item, multiple choice test that addresses the circled objectives in each of the Mathematics curriculum strands (Numbers and Numeration, Computation, Fractions, Decimals and Percents, Measurement, Geometry, and Estimating/Graphs). The Level 8 test is a fifty-nine item instrument developed by the State Department and mandated for Grade 8 students. Since it broadly correlates with the curriculum objectives and in the interest of limiting testing, the instrument serves both the State and system requirements.

DESCRIPTION OF CHART

On the following page a chart is provided that identifies certain items and corresponding objectives at each level. The items are those which fewer than 50% of the students answered correctly.

GENERAL TRENDS

Generally, performance is good on the subtests of Numbers/Numeration and Computation with approximately seventy to eighty percent of the students answering the items correctly. However, performance is markedly poor on the subtests of Fractions and Decimals. These deficits have a cumulative effect in that as the as the grade level of the test increases, the number of incorrect items increases. Only one of the forty items in Level 3 is identified, whereas, by Level 7, nineteen of the forty items (48%) were answered incorrectly by more than 50% of the students. Of these items the greatest preponderance of objectves tapped are the Fraction and Decimals objectives. Another problem area exists in the Measurement subtest, in particular, the objectives relating to English and metric linear measurements, units of capacity, and temperature.

CURRICULUM REFERENCED TEST ANALYSIS
1985 - 1986
DEPARTMENT OF EDUCATIONAL TESTING
MATHEMATICS Grades 3 - 8

LEVEL	ITEM #	% ANSWERING CORRECTLY	OBJECTIVE NUMBER	OBJECTIVE DESCRIPTION
3	21	48%	C.7	solving simple word problems w. frac.
	23	44%	C.2	arranging unit frac. in order of size
	29	47%	D.2	solving word problems
4	19	37%	C.2	comparing size of two common fractions
	20	47%	C.10	writing improper frac. as mixed numb.
	21	47%	C.9	writing mixed numb. as improper frac.
	25	45%	D.7	word prob. involv. dec. and money
	31	43%	E.1	telling what time it will be
	33	46%	F.1	identifying types of lines
	37	34%	G.1	rounding off #'s
5	12	43%	C.13	dividing common fractions
	14	41%	C.5	add. & sub. common frac. w. unlike denom.
	16	42%	C.9	sub. common frac. from one-digit whole #
	17	43%	C.11	mult. common frac. and whole number
	18	46%	C.12	mult. mixed # by common fraction
	19	46%	C.14	div. frac. by whole # & visa versa
	20	38%	C.17	solv. simple proportion prob.
	23	37%	D.7	div. dec. & mixed dec. of two digits
	29	26%	E.7	add. & sub. English linear meas.
	30	46%	E.8	add. & sub. English units of capacity
	36	46%	F.12	finding area of rectangle or square
	37	44%	G.2	rounding off mixed decimals
6	14	49%	C.7	add. mixed #'s w. like denom.
	15	44%	C.8	sub. mixed #'s w. like denom.
	17	49%	C.10	mult. 2 or 3 comm. or mixed frac.
	19	43%	C.11	div. comm. or mixed frac. or whole #'s
	20	47%	C.13	solving ratio & prop. problems
	22	31%	D.3	arranging dec. in order of size
	26	29%	D.10	chging comm. frac. w. term. dec.
	28	46%	D.17	finding % of whole number
	30	33%	E.10	approx. Celsius temp. reading
	32	46%	E.6	renaming improper Eng. & metric linear
	38	38%	G.4	probability in word prob.
	39	38%	G.8	info. from table or schedule
7	11	41%	D.14	chging common frac. to %'s
	13	46%	C.14	one and two-step word prob. w. frac.
	14	46%	C.6	fractional part of whole numb.
	15	36%	E.9	boiling & freez. pts. of water
	16	41%	C.8	sub. mixed #'s w. unlike denom.
	17	46%	C.9	mult. 2 or 3 common frac.
	21	39%	D.2	dec. place value to millionth place
	25	38%	D.12	dec. to thous. place & mixed #'s to %'s
	26	37%	D.9	dividing by moving dec. point
	28	28%	D.16	finding % of whole # or mixed dec.
	29	41%	E.1	calc. elapsed time
	31	22%	E.10	app. temp. reading
	32	33%	F.3	identif. parts of angles
	33	36%	F.13	finding perimeter
	34	33%	F.15	area of tri., parall., or trap.
	35	42%	F.16	identif. parts of circles
	37	37%	G.3	est. answers by rounding off
8 *	9	41%	N.A.	compute by using time
	12	44%	N.A.	compute by using temperature
	18	48%	N.A.	est. weight/mass, cap., time, temp.
	19	39%	N.A.	est. weight/mass, cap., time, temp.
	23	41%	N.A.	perm. of tri., sq., rect.
	24	42%	N.A.	area of tri., sq., rect.
	47	33%	N.A.	using ratio and prop.
	48	44%	N.A.	using simple formulas
	53	49%	N.A.	finding %of # in situations
	54	49%	N.A.	changing frac. to dec.

* Basic Skills Test

MATHEMATICS - LEVEL 3

INSTRUMENT AND POPULATION DESCRIPTION

This is a forty-item multiple choice test measuring selected circled objectives in the curriculum strands of Numbers/Numeration (7 items), Computation (10 items), Fractions (6 items), Decimals/Percents (6 items), Measurement (4 items), Geometry (3 items), and Estimating/Graphs (4 items).

The population includes all students enrolled in grade 3 who took an on-level test and for whom valid answer sheets were turned in.

SYSTEM STRENGTHS AND WEAKNESSES

Overall, students performed well on this test with a system-wide average of 76%. Generally, students seem to be mastering the objectives in the subtests of Numbers/Numeration, Measurement, Geometry, and Estimating/Graphs and most of the items tapped in Computation, Fractions, and Decimals/Percents. However, within these subtests, there are isolated objectives which are not being mastered by more than fifty percent of the students. Within Computation, students are having difficulty with multiplying one or two digits by 10 or 100 adding zeros. Within the Fraction domain students are having difficulty with word problems and arranging unit fractions in order of size. In Decimals/Percents the difficulty lies in solving word problems.

BOSTON PUBLIC SCHOOLS

DEPARTMENT OF EDUCATIONAL TESTING

CURRICULUM REFERENCED FINAL

1985 - 1986

MATHEMATICS - LEVEL 3

Strand	Item	Objective	
NUMBERS AND NUMERATION	1	A.1	Nos. from 0 to 9,999
	2	B.6	Multiplying 3-digit nos. by 1-digit nos.
	3	A.5	Writing nos. that come before or after a given no.
	4	A.8	Identifying odd and even nos.
	5	A.3	Identifying place value to the thousand place
	6	A.7	Skip counting by twos, threes, etc.
	7	A.2	Identifying other ways of writing a given no.
COMPUTATION	8	B.1	Memorizing multiplication facts
	9	B.3	Adding nos. with up to three digits written vertically
	10	B.5	Subtracting 3-digit nos. written vertically
	11	B.7	Multiplying three 1-digit nos. written horizontally
	12	B.2	Memorizing division facts
	13	B.16	Solving word problems
	14	B.4	Adding two 1-, 2-, 3-digit nos. written vert. or horiz.
	15	B.6	Multiplying 3-digit nos. by 1-digit nos. written vert.
	16	B.11	Multiplying 1- and 2-digit nos. by 10 or 100 add zeroes
	17	B.16	Solving word problems
FRACTIONS	18	C.3	Identifying fractions equal to one whole
	19	C.4	Identifying equivalent fractions using drawings
	20	C.1	Writing fractions up to eigths for shaded drawings
	21	C.7	Solving simple word problems involving fractions
	22	C.1	Writing fractions up to eigths for shaded drawings
	23	C.2	Arranging unit fractions in order of size; drawings
DECIMALS AND PERCENTS	24	D.1	Writing nos. for dollars and cents, written words
	25	D.3	Smallest no. of coins needed to make an amt. of money
	26	D.4	Adding and subtracting dollars and cents
	27	D.2	Computing the value of a collection of coins; pictures
	28	D.4	Adding and subtracting dollars and cents
	29	D.5	Solving word problems
MEASUREMENT	30	E.1	Telling time from a clock face
	31	E.6	Finding a specific day or date on a calendar
	32	E.4	Using a chart of time equivalencies with abbreviations
	33	E.12	Reading a Fahrenheit thermometer
GEOMETRY	34	F.1	Identifying point where two sts. intersect on a map
	35	F.6	Finding the perimeter of a square or rectangle
	36	F.9	Identifying six geometric solids
ESTIMATING/ GRAPHS	37	G.1	Rounding off numbers to the nearest ten or hundred
	38	G.1	
	39	G.2	Reading and constructing picture or bar graphs
	40	G.2	

```
 932 MATH LEVL 3        TECR5005            11/07/86
PERCENTAGE OF CORRECT ANSWERS PER ITEM
NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY **

SCHL     1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 TOTAL

 4160   ** 88 84 84 70 72 78 84 88 76 76 82 96 90 80 58 88 80 72 84 41 94 58 90 86 72 80 90 58 76 98 94 96 88 90 90 88 76 90 ** 82
 4170   95 91 91 91 82 73 69 ** 82 82 91 91 86 95 86 56 95 73 86 91 56 95 69 95 91 73 95 95 52 82 ** 95 ** 82 95 91 91 86 95 ** 86
 4173   ** 75 90 95 80 95 85 ** 85 65 90 75 ** 85 70 75 90 75 95 60 65 95 60 95 95 70 80 85 30 70 90 95 95 90 85 ** 70 65 85 ** 82
 4220   93 86 63 67 67 45 76 91 80 67 82 89 78 80 73 60 89 34 67 76 34 89 19 73 65 65 71 73 47 82 76 71 73 52 63 56 32 50 54 84 67
 4221   ** 97 82 77 82 65 72 85 80 85 87 80 92 87 80 80 90 57 87 77 72 92 80 87 90 85 80 95 57 80 92 95 92 85 92 92 67 70 82 97 83
 4570   94 74 72 88 57 64 72 75 70 66 72 53 92 74 70 35 87 79 79 83 38 92 44 94 77 81 70 81 40 53 92 88 92 61 87 83 27 55 75 94 72
 4571   96 73 80 92 84 84 88 69 80 80 84 69 84 92 46 30 92 88 96 84 57 88 ** 88 96 69 88 69 57 88 96 96 96 96 88 88 80 88 ** ** 83
 4010   98 77 73 80 71 68 68 90 78 72 73 77 94 88 73 64 87 74 71 72 57 91 42 88 80 68 75 81 51 70 94 87 83 73 63 73 62 58 71 95 75
 4240   98 58 80 75 63 56 68 88 65 58 55 75 86 80 55 35 71 75 66 73 45 78 30 86 70 48 65 70 28 46 90 75 83 66 58 68 48 73 58 81 66
 4241   95 91 91 95 78 82 86 69 78 69 95 86 95 86 56 73 95 91 86 86 82 ** 73 95 86 52 95 82 60 65 ** 95 95 73 95 86 91 82 ** 95 85
 4270   98 69 88 88 75 81 88 86 81 81 86 83 94 84 75 67 92 84 86 83 47 94 35 94 86 69 92 77 52 71 92 86 96 79 90 92 58 69 75 ** 81
 4310   ** 82 85 85 75 71 60 57 78 64 89 64 89 85 53 46 92 82 75 67 60 85 35 92 78 64 82 89 42 75 96 92 89 78 85 85 42 53 71 96 75
 4311   95 85 80 85 76 71 61 76 80 76 71 57 90 90 71 61 80 85 80 80 52 85 38 90 80 71 76 95 33 71 ** 90 ** 76 85 95 47 66 80 95 77
 4370   ** 92 85 92 70 85 70 85 85 77 81 81 85 92 85 48 88 77 62 70 51 92 44 77 81 81 85 85 66 85 88 88 88 70 81 85 70 77 81 96 80
 4371   ** 93 85 87 71 76 71 95 84 87 84 75 95 95 75 75 92 87 84 84 37 90 18 95 82 71 89 92 42 67 95 89 98 73 79 85 56 68 82 96 80
 4430   96 93 93 96 80 77 83 83 74 83 80 83 93 83 70 41 87 80 77 83 61 93 64 90 83 74 87 70 64 64 96 80 93 83 70 90 80 74 80 93 81
 DISA   97 81 81 84 72 70 74 85 78 74 79 76 91 86 70 57 88 75 78 78 51 90 46 89 81 69 80 82 48 70 93 87 90 75 79 82 60 67 77 94 77

 4030   95 55 45 80 55 60 65 70 75 65 60 75 90 80 30 30 80 65 65 60 40 85 35 ** 95 55 75 65 25 65 ** 85 ** 60 50 90 55 50 70 ** 67
 4031   ** 68 72 81 86 72 86 81 72 63 77 59 81 81 36 54 86 72 90 86 40 90 22 86 77 68 63 77 27 68 86 81 90 72 50 72 63 59 63 90 71
 4081   ** 75 78 84 66 75 60 72 93 72 75 51 ** 87 42 72 96 81 90 84 45 93 24 93 90 72 93 75 54 78 87 90 90 72 66 72 48 75 87 96 77
 4082   ** 76 76 76 52 61 61 85 61 52 52 66 90 85 52 47 95 38 95 47 42 76 23 95 95 57 85 85 28 76 80 85 80 42 66 80 57 57 61 95 68
 4290   91 86 71 66 66 75 73 75 82 82 64 66 93 88 75 51 84 48 71 68 44 86 20 86 86 73 77 77 42 55 86 82 82 64 73 73 51 68 48 88 71
 4560   96 85 75 82 75 63 70 84 71 80 70 77 87 85 56 64 87 75 89 77 29 84 29 92 82 75 82 84 52 63 91 92 92 70 82 82 75 64 70 94 76
 4561   ** 84 72 88 80 64 68 88 88 40 80 68 84 88 48 64 84 72 88 80 52 88 32 96 92 68 76 76 44 84 80 92 92 80 64 96 60 64 72 88 75
 4690   94 85 69 78 51 63 68 85 77 88 60 73 88 85 85 50 90 67 76 56 50 85 39 94 79 78 71 77 52 34 93 77 88 71 77 79 62 54 71 89 73
 4070   92 78 89 87 68 59 85 80 78 73 75 68 89 87 70 84 84 77 75 70 59 80 59 85 80 59 78 70 50 61 92 89 80 66 63 85 59 61 78 94 76
 4080   ** 92 92 ** 92 92 88 92 88 96 76 88 92 96 84 88 ** 84 88 96 72 96 60 96 88 92 92 92 60 72 ** ** 96 96 88 92 92 96 92 ** 89
 4151   93 89 92 90 76 78 81 87 81 85 92 79 92 98 78 62 96 67 82 64 68 82 54 92 89 76 68 84 45 64 93 92 89 71 64 85 73 78 73 95 80
 4190   93 87 75 84 71 75 68 87 73 67 79 76 87 89 78 70 82 75 78 71 48 82 59 90 75 64 64 71 39 57 90 84 87 73 78 81 60 57 78 92 75
 4192   93 90 86 76 76 60 63 80 86 73 83 66 90 90 73 63 86 83 76 80 50 90 66 90 93 76 76 73 73 73 93 73 83 73 93 83 73 66 90 90 79
 4200   95 95 69 91 73 86 69 ** 73 43 82 73 ** 86 78 60 78 56 86 78 47 91 43 69 86 60 82 78 39 69 ** ** 91 73 82 78 91 82 95 95 78
 4201   95 87 80 87 73 75 63 85 90 78 87 68 92 92 73 56 97 56 85 75 46 95 14 92 90 78 87 82 58 73 ** 97 87 75 85 95 85 80 85 90 80
 4670   ** 78 78 ** 68 84 78 78 84 57 84 73 94 ** 52 52 89 94 73 78 36 89 31 ** 84 78 89 89 68 73 ** 94 89 89 94 78 52 63 63 ** 79
 DISB   95 83 77 85 69 70 72 83 79 74 74 71 90 89 68 61 89 69 81 71 49 86 40 91 85 71 77 78 48 62 92 87 88 71 74 82 66 66 74 93 76

 4351   97 76 78 89 78 71 65 92 57 73 71 76 92 81 60 81 92 68 71 89 63 86 81 92 65 60 81 71 65 50 92 89 94 76 63 81 60 57 76 89 76
 4130   92 73 68 82 64 65 64 78 65 62 67 67 87 82 53 48 87 64 76 60 43 81 34 87 84 56 68 76 39 46 98 73 85 78 78 73 59 59 59 89 69
 4131   ** 87 61 90 67 58 58 96 64 77 64 77 96 87 61 67 83 61 77 61 51 83 45 83 83 70 77 80 45 51 93 87 87 61 70 70 41 48 67 87 72
 4140   ** 74 66 96 74 81 85 85 81 62 48 62 96 96 51 62 96 59 85 70 55 96 51 96 85 74 88 74 59 74 ** 96 88 77 77 85 55 62 81 ** 77
 4150   95 70 85 89 76 70 74 82 72 70 82 78 91 87 53 51 89 61 80 76 42 89 27 85 85 57 80 80 44 61 97 97 97 80 82 82 72 65 80 95 76
 4250   93 68 77 83 64 70 67 75 68 53 68 55 93 86 49 40 93 74 74 71 51 82 41 91 80 47 80 76 40 56 86 82 77 61 70 76 40 50 61 92 69
 4340   88 75 72 78 68 69 73 72 70 71 60 62 88 79 62 46 81 70 67 78 43 92 30 88 69 58 67 70 42 59 88 81 90 73 73 72 64 54 59 87 70
 4350   97 86 80 84 61 65 60 86 70 70 61 60 89 88 69 38 89 52 73 81 42 85 28 88 84 61 84 70 38 62 90 84 84 74 57 74 50 48 65 88 70
 4390   ** 95 75 87 70 95 54 58 75 87 66 58 ** ** 70 50 ** 50 79 83 58 75 20 91 87 70 83 58 54 75 95 67 95 66 79 83 50 70 79 95 75
 4391   91 26 69 73 69 56 47 73 56 56 78 52 ** 73 26 34 91 73 78 65 52 86  0 91 91 52 86 73 52 60 91 95 95 73 52 73 78 73 86 91 68
 4400   98 64 82 84 58 66 64 74 76 66 64 70 90 86 45 50 94 58 66 62 39 84 37 94 84 74 80 90 47 66 94 82 88 68 76 74 74 66 68 98 72
 4550   ** 92 72 92 64 80 80 92 80 68 92 84 88 96 88 80 72 72 64 72 48 68 68 88 84 76 92 76 64 68 84 76 88 64 60 84 20 32 68 92 75
 4022   ** ** 81 ** 68 77 90 86 81 77 77 86 ** 90 68 63 95 45 77 77 54 90 27 ** 95 86 77 86 50 54 95 95 86 72 72 68 77 72 77 95 79
```

```
932 MATH LEVL 3        TECR5305        11/07/86
PERCENTAGE OF CORRECT ANSWERS PER ITEM
NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY **

SCHL     1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 TOTAL

4352    ** 77 83 94 72 83 88 88 72 61 66 77 ** ** 61 83 94 83 83 61 50 83 27 ** 88 83 94 88 44 77 ** ** 83 72 77 ** 83 88 77 ** 81
4100    ** 84 90 95 87 86 89 84 84 86 83 70 95 92 66 72 90 84 84 84 58 95 75 90 86 78 81 84 67 78 93 89 95 84 96 87 80 78 84 96 84
4120    ** 85 75 95 75 60 65 90 75 96 80 80 95 ** 60 80 95 95 95 85 65 95 45 ** 85 85 85 80 70 80 ** 95 95 90 60 70 90 80 80 ** 83
4121    ** 94 82 88 88 70 82 82 82 58 76 64 88 ** 58 76 ** 70 76 82 64 ** 35 ** ** 82 94 88 76 82 88 94 88 94 64 82 64 70 ** ** 82
4533    98 68 81 86 71 70 86 68 76 68 81 58 93 88 60 43 88 70 61 80 61 90 46 91 90 58 80 73 41 73 93 83 68 70 90 90 71 70 76 96 75
4531    ** 88 83 ** 94 83 83 83 ** 77 83 83 ** 88 72 66 88 66 94 77 66 88 61 83 88 72 83 88 61 72 ** ** 94 88 61 94 77 72 94 94 84
4590    98 84 82 84 75 81 77 93 75 74 75 75 81 86 63 81 84 89 60 81 50 82 53 93 89 68 72 75 51 74 86 86 82 72 82 87 58 55 67 89 77
4592    ** 78 85 92 ** 64 85 92 85 85 85 71 92 85 78 71 ** 92 92 ** 78 ** 78 ** 85 64 92 78 50 85 92 92 ** 71 85 85 78 92 85 ** 86
4630    89 89 88 82 67 64 75 82 73 77 72 81 86 86 68 53 84 58 77 60 49 63 49 90 80 69 83 77 40 71 90 85 88 77 76 83 60 61 72 90 75
DISC    95 78 79 86 70 71 72 81 73 70 71 68 91 87 60 55 88 68 74 74 51 86 43 90 82 64 79 76 47 65 91 86 88 73 74 80 61 61 71 92 74

4260    ** 77 83 90 71 64 67 79 79 75 69 64 84 83 67 47 88 71 73 67 20 92 24 88 83 66 83 73 37 56 90 84 90 58 69 69 56 45 79 92 71
4280    92 86 89 88 74 60 80 84 94 80 82 80 94 94 68 70 94 84 92 80 43 90 68 94 90 84 86 84 54 80 92 88 92 82 68 98 90 80 82 90 83
4283    91 69 86 89 59 69 86 88 74 77 83 69 89 86 62 62 89 61 86 72 50 86 38 91 84 74 84 83 50 76 94 88 91 76 67 91 72 66 72 93 77
4381    96 74 85 96 77 77 92 85 77 62 85 48 ** 92 74 48 81 92 70 88 48 96 85 ** 81 77 77 66 37 77 96 85 96 81 66 85 62 48 70 ** 78
4640    90 69 76 82 71 75 61 67 68 63 71 64 81 81 56 54 84 73 76 72 50 86 43 82 69 56 72 64 32 52 83 75 85 62 68 72 47 54 66 81 68
4650    95 76 72 87 63 70 84 78 69 72 75 71 89 93 70 64 93 80 82 81 48 89 43 90 86 69 77 81 51 80 93 87 94 71 78 94 60 65 77 90 77
4062    96 89 96 ** 78 ** 82 85 82 67 92 75 92 92 64 85 ** 92 85 78 75 ** 75 92 85 85 89 82 67 89 ** 92 96 60 92 92 78 82 85 89 86
4321    93 87 69 87 78 84 71 84 84 84 68 78 96 87 62 46 93 65 87 81 50 93 46 93 84 75 87 75 62 75 87 87 93 78 87 75 59 62 75 90 78
4322    96 82 60 84 72 60 72 90 74 80 82 78 82 92 68 52 78 56 80 76 41 88 35 80 78 70 78 76 45 72 88 80 86 66 68 82 72 74 64 88 74
4361    ** 88 76 96 84 84 76 84 80 76 60 60 92 96 64 36 92 48 96 72 32 80 36 96 92 68 ** 84 32 68 92 ** 88 84 80 ** 64 60 80 96 77
4541    97 ** 73 94 79 76 73 76 82 67 88 64 85 91 76 38 82 82 88 76 38 85 32 97 97 79 79 85 50 82 88 97 91 58 61 97 76 67 76 97 78
4543    90 86 61 84 77 77 52 86 75 70 61 72 84 79 72 47 64 43 72 45 45 65 61 93 77 63 70 70 56 59 88 93 79 75 63 75 29 25 65 86 69
DISD    94 81 76 88 71 72 73 80 76 72 75 69 87 87 67 55 88 71 81 74 45 87 46 89 82 69 80 76 47 70 90 86 89 69 71 84 62 60 73 89 75

4053    96 87 70 90 61 48 70 80 80 80 80 80 90 90 67 32 93 58 74 87 38 96 54 93 90 77 96 96 51 64 96 96 90 67 74 83 83 67 83 96 78
4061    ** 85 76 90 80 71 90 95 76 76 71 76 85 80 42 42 90 52 66 57 47 47 33 90 90 47 90 85 38 38 ** ** 95 71 57 85 42 57 57 95 72
4113    ** 63 89 68 63 73 89 89 89 47 78 73 94 89 68 47 ** 84 84 73 42 ** 31 94 89 63 89 ** 57 78 ** 94 84 84 73 94 68 52 ** ** 79
4210    97 88 86 ** 90 79 72 90 83 79 88 86 93 90 83 69 97 88 97 90 32 97 79 88 95 88 86 83 51 79 97 ** 97 74 86 95 95 86 97 95 86
4230    98 72 63 83 63 63 63 79 64 63 57 52 86 82 54 50 89 55 69 69 35 95 27 89 75 64 79 75 38 57 95 75 85 55 60 85 60 61 54 83 68
4271    95 95 95 95 87 85 80 92 90 82 90 92 92 90 96 67 95 90 90 87 65 ** 75 95 92 82 87 92 65 80 92 92 77 70 92 90 ** 95 95 ** 88
4360    ** 65 75 87 65 55 67 85 65 52 57 70 90 70 55 42 77 65 67 72 25 87 27 82 87 52 65 57 37 57 90 77 82 65 57 80 60 57 55 77 66
4410    94 71 83 86 84 83 86 88 77 71 61 59 93 89 55 64 88 83 76 86 50 93 50 89 91 69 86 71 45 72 96 91 91 76 77 89 71 71 71 96 78
4580    98 69 78 82 75 73 73 77 66 54 71 61 92 85 55 61 91 65 78 82 51 95 57 89 85 58 82 72 38 58 97 85 95 63 67 85 69 60 83 97 75
4610    **  0 ** 25 75 25 75 ** 50 25 75  0 ** 75 50  0 75 25 75 75 25 75 25 ** 75 25 50 75  0 50 ** 75 ** ** ** 25 **  0 ** ** 60
4620    98 82 87 92 75 76 75 85 82 82 80 71 91 97 61 56 97 67 79 88 47 97 47 97 96 80 93 93 65 92 98 96 93 84 87 89 87 82 78 98 83
DISE    97 75 80 87 75 71 75 85 75 68 72 68 91 87 62 55 91 70 78 81 44 93 49 91 88 68 84 80 48 69 96 89 90 74 74 87 75 69 76 94 77

DISA    97 81 81 84 72 70 74 85 78 74 79 76 91 86 70 57 88 75 78 78 51 90 46 89 81 69 80 82 48 70 93 87 90 75 79 82 60 67 77 94 77
DISB    95 83 77 85 69 70 72 83 79 74 74 71 90 89 68 61 89 69 81 71 49 86 40 91 85 71 77 78 48 62 92 87 88 71 74 82 66 66 74 93 76
DISC    95 78 79 86 70 71 72 81 73 70 71 68 91 87 60 55 88 68 74 74 51 86 43 90 82 64 79 76 47 65 91 86 88 73 74 80 61 61 71 92 74
DISD    94 81 76 88 71 72 73 80 76 72 75 69 87 87 67 55 88 71 81 74 45 87 46 89 82 69 80 76 47 70 90 86 89 69 71 84 62 60 73 89 75
DISE    97 76 80 87 75 71 75 85 75 68 72 68 91 87 62 55 91 70 78 81 44 93 49 91 86 68 84 80 48 69 96 89 90 74 74 87 75 69 76 94 77
STUT    96 80 78 86 71 71 73 82 76 72 74 70 90 87 65 57 89 70 78 75 48 88 44 90 63 68 80 78 47 66 92 87 89 73 74 82 64 64 74 92 76
```

MATHEMATICS - LEVEL 4

INSTRUMENT AND POPULATION DESCRIPTION

This is a forty-item multiple choice test measuring selected circled objectives in the curriculum strands of Numbers/Numeration (4 items), Computation (11 items), Fractions (6 items), Decimals (4 items), Measurement (6 items), Geometry (5 items), and Estimating/Graphs (4 items).

The population includes all students enrolled in grade 4 who took an on-level test and for whom valid answer sheets were turned in.

SYSTEM STRENGTHS AND WEAKNESSES

Overall, students performed well on this test with a system-wide average score of 72%. Generally, students appear to be mastering the objectives in the subtests of Numbers/Numeration and Computation and most of the objectives tapped in Decimals, Measurement, Geometry and Estimating/Graphs. However, within these subtests, there are isolated objectives which are not being mastered by more than fifty percent of the students. Within Decimals students are having difficulty with word problems involving decimals and money. Within the Measurement domain students are not mastering the objective of telling what time it will be a specified number of hours and minutes hence. In Geometry the difficulty lies with identifying parallel, perpendicular, and intersecting lines on a street map. In Estimating/Graphs only 34% of the students are able to round off numbers to the nearest ten, hundred, or thousand.

The most severe deficits as a strand lie in Fractions where of six items, there are four that fewer than 60% of the students answered correctly. The objectives measured by these items are renaming equivalent fractions to higher denominators, comparing the size of fractions, writing mixed numbers as improper fractions, and its inverse.

BOSTON PUBLIC SCHOOLS

DEPARTMENT OF EDUCATIONAL TESTING

CURRICULUM REFERENCED FINAL MATHEMATICS - LEVEL 4

1985 - 1986

NUMBERS AND NUMERATION	1	A.5	Skip counting by twos, threes, etc.
	2	A.6	Identifying any number as odd or even
	3	A.1	Writing numerals to the millions place
	4	A.3	Identifying place value to the millions place
COMPUTATION	5	B.3	Adding three 4-digit numbers written vertically
	6	B.5	Subtracting two 4-digit nos. with regrouping; vertically
	7	B.1	Memorizing multiplication facts through 12 x 12
	8	B.2	Memorizing division facts through 144 - 12
	9	B.6	Subtracting a 2-digit from a 3-digit no.
	10	B.4	Adding two 3- and 4-digit nos. written vert. or horiz.
	11	B.7	Multiplying 3-digit nos. by 2-digit nos.; vert.
	12	B.8	Multiplying a 2-digit no. by a 1-digit no.; vert. or horiz.
	13	B.20	Solving one and two-step word problems
	14	B.10	Dividing 4-digit by 1 digit nos.
	15	B.20	Solving one and two-step word problems
FRACTIONS	16	C.3	Identifying fractions equal to one whole
	17	C.5	Renaming equivalent fractions to higher denominators
	18	C.7	Adding and subtracting two mixed nos. with like denominators
	19	C.2	Comparing the size of two common fractions using or
	20	C.10	Writing improper fractions as mixed numbers
	21	C.9	Writing mixed numbers as improper fractions
DECIMALS	22	D.1	Writing nos. for dollars and cents written in words
	23	D.5	Writing one quarter, one half and three quarters in decimals
	24	D.3	Given four sets of coins, identifying which has the most
	25	D.7	Solving word problems involving decimals and money
MEASUREMENT	26	E.4	Doing one-step conversions between seconds and minutes, etc.
	27	E.3	Memorizing basic equivalencies of units of time
	28	E.17	Identifying the appropriate unit of measurement
	29	E.16	Identifying the appropriate measuring instrument
	30	E.10	Doing one-step conversions between inches, feet, etc.
	31	E.1	Telling what time it will be; no. of hrs. and mins. hence
GEOMETRY	32	F.5	Identifying nine two-dimensional figures
	33	F.1	Identifying parallel, perpendicular, and intersecting lines
	34	F.6	Identifying where these shapes appear in the real world
	35	F.9	Finding the perimeter of a rectangle and a square
	36	F.13	Recognizing seven geometric solids given drawings and list
ESTIMATING/ GRAPHS	37	G.1	Rounding nos. off to the nearest ten, hundred or thousand
	38	G.2	Estimating answers to word problems by rounding off
	39	G.4	Using picture and bar graphs to answer ques. and solve prob.
	40	G.4	

```
 942 MATH LEVL 4          TECESOOR          11/07/80
PERCENTAGE OF CORRECT ANSWERS PER ITEM
NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY **

SCHL    1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 TOTAL

4160   76 82 98 80 94 66 98 86 86 96 90 94 60 74 66 92 47 60 33 43 50 83 84 78 50 78 80 92 96 66 56 92 60 84 60 82 25 70 94 84 76
4170   55 72 ** 94 77 83 ** 94 72 83 72 83 55 27 44 77 22 72 11 11  5 94 83 77 11 72 33 83 83 55 22 63 22 66 55 77 38 44 88 94 62
4173   60 92 ** 85 95 90 92 92 97 97 75 95 78 78 60 77 48 90 43 58 46 97 95 65 68 80 78 95 92 73 58 92 48 73 63 90 34 58 97 95 78
4220   93 74 95 60 81 81 93 88 86 90 88 81 53 72 48 67 48 53 48 39 44 67 58 48 25 72 74 79 65 41 41 79 44 67 62 58 41 58 69 72 65
4221   53 78 97 87 80 75 87 85 82 92 58 82 60 60 60 80 60 78 19 51 46 90 92 63 43 60 43 82 87 65 31 92 46 80 31 58 14 58 92 90 67
4570   82 84 96 74 92 84 94 94 92 98 80 90 80 78 72 96 80 92 64 54 36 96 94 74 38 80 76 88 92 62 46 92 62 86 80 76 44 76 90 96 79
4571   72 89 92 83 86 89 96 98 86 96 87 93 69 80 55 96 80 81 33 70 72 93 90 80 41 84 89 75 95 58 50 96 49 86 72 78 52 73 96 83 79
4010   65 70 96 77 90 90 92 90 88 95 80 91 66 77 64 92 55 70 49 48 62 96 90 61 32 81 62 77 93 59 40 92 39 83 33 62 19 64 90 72 71
4240   57 75 96 81 85 83 92 80 77 93 57 85 48 66 63 82 41 58 48 40 52 93 80 68 37 72 68 75 86 47 48 88 46 68 58 57 41 57 92 83 68
4241   26 73 ** 91 86 65 95 95 69 78 52 95 69 47 56 91 56 55 47 30 21 95 ** 73 34 65 47 91 ** 52 30 91 17 60 60 69 26 47 95 ** 66
4270   68 75 92 90 95 92 92 97 90 97 92 97 48 70 60 ** 56 68 26 26 56 95 97 75 14 87 53 73 95 39 31 80 48 60 65 51 24 60 90 92 70
4310   72 80 ** 92 88 87 88 84 80 76 56 88 80 52 44 96 20 96 12  4 12 84 96 76 32 84 48 76 96 48 40 92 44 88 44 44 36 60 96 92 67
4311   66 88 ** 98 94 94 ** 88 94 94 77 94 83 77 72 94 98 83 33 38 55 94 94 88 38 66 77 83 ** 50 44 94 50 94 50 83 27 72 ** ** 78
4370   61 80 96 88 88 92 92 68 88 92 34 76 53 69 53 92 38 76 15 57 11 92 88 65 38 76 42 61 84 65 46 88 38 80 26 57  3 57 76 80 65
4371   ** 72 96 93 ** 96 93 96 96 ** 96 ** 90 84 84 90 90 87 45 78 63 96 93 81 66 93 81 78 96 72 51 84 45 84 57 72 27 78 ** 96 83
4430   92 ** 96 ** 96 88 ** 96 ** ** 96 96 84 92 80 96 92 96 76 84 80 ** 88 96 53 96 92 96 ** 88 76 ** 69 92 73 96 65 92 ** 96 90
DISA   69 79 96 83 89 86 93 90 86 94 76 90 65 71 62 90 58 76 40 48 49 92 88 71 39 78 68 81 91 58 45 90 47 78 56 68 33 64 91 86 73

4030   83 79 91 87 95 91 ** 91 87 95 83 91 66 79 66 83 54 62 37 50 41 91 87 70 37 66 70 91 95 70 41 ** 50 70 58 75 16 62 95 79 73
4031   56 87 93 75 93 87 93 87 81 87 62 93 87 50 56 93 56 62 12 12 25 93 ** 81 43 81 62 68 93 56 31 81 25 68 31 68 31 75 93 93 68
4081   55 89 ** 82 79 75 82 93 86 86 55 82 58 55 55 96 58 13 17  6 10 ** 96 75 41 72 79 89 93 51 24 89 34 62 37 55 31 55 93 89 65
4082   52 92 96 92 92 88 96 ** 96 88 76 92 64 72 36 96 44 88 40 16 20 84 88 76 68 84 76 60 96 56 52 88 52 96 60 76 36 88 92 88 73
4290   76 82 92 84 94 88 90 86 92 94 73 94 57 71 59 94 46 67 30 44 53 96 96 76 46 82 73 82 96 51 55 84 63 82 69 69 32 63 98 92 74
4560   78 81 93 87 95 87 92 87 87 98 81 93 72 80 58 ** 40 38 32 30 36 93 95 75 16 81 55 87 96 52 40 96 49 76 55 78 41 84 93 90 72
4561   44 83 ** 77 94 88 ** 94 94 94 ** ** 83 72 83 94 88 88 11 33 33 ** 88 77 66 61 88 ** ** 61 38 77 55 55 50 66 22 44 94 83 74
4690   56 78 94 80 93 84 92 83 87 90 50 89 55 61 48 92 40 56 38 43 20 88 88 84 20 70 51 77 89 51 30 89 40 74 49 65 33 75 93 93 67
4070   97 97 97 89 93 65 97 95 91 87 93 85 89 89 82 91 85 78 42 82 85 78 63 63 76 85 78 89 87 72 48 89 57 57 74 59 23 53 65 57 77
4080   61 72 83 ** 83 88 88 83 72 88 66 88 38 38 38 83 66 77 38 61 61 83 83 61 55 77 44 77 94 66 22 83 33 66 61 77 27 33 94 83 67
4151   67 85 96 91 96 96 93 95 97 96 79 95 67 71 72 95 41 64 30 45 46 98 93 83 48 86 60 76 98 67 35 91 43 76 35 61 33 59 93 91 74
4190   46 63 95 61 85 84 98 87 85 92 73 90 50 46 47 90 53 57 30 33 34 87 85 71 44 73 68 79 95 49 33 90 49 88 68 60 34 63 92 92 68
4192   89 97 97 97 92 ** 94 89 84 89 76 89 71 78 73 94 60 81 34 47 63 94 94 78 42 76 47 81 ** 68 52 94 55 81 73 76 28 60 97 86 77
4200   87 75 96 61 96 78 90 96 93 93 81 90 68 65 62 96 50 68 21 65 46 90 87 75 78 81 62 84 93 65 40 84 78 78 53 71 65 71 96 87 76
4201   90 96 ** 90 83 87 90 96 53 83 77 90 96 61 64 96 77 38 70 58 80 96 87 77 80 87 80 80 ** 87 74 ** 80 90 12 80 19 83 96 87 80
4670   45 75 80 70 ** 75 ** 90 85 ** 50 ** 80 65 60 95 25 45 30 30 15 95 85 60 20 75 60 75 90 70 10 90 35 85 35 60 10 75 90 80 65
DISB   68 82 94 83 92 85 93 90 88 92 72 91 67 67 60 93 52 60 33 42 42 91 88 76 44 78 64 81 94 60 39 90 50 76 53 67 32 67 92 87 72

4051   80 95 93 95 88 82 ** 93 86 95 82 91 77 73 57 95 71 73 51 64 82 95 88 68 48 68 57 82 88 51 42 95 48 82 64 82 55 71 95 91 77
4130   72 80 93 82 90 85 90 86 90 92 75 88 59 71 53 96 42 81 21 52 48 96 86 73 48 73 73 86 88 60 27 89 31 75 39 65 22 64 96 90 71
4131   ** ** ** ** ** ** ** 95 ** ** 95 ** ** ** 95 ** 85 ** 95 95 90 ** ** ** ** ** 95 ** ** ** 95 ** 90 90 80 95 95 ** ** ** 97
4140   73 70 96 66 73 76 90 76 70 76 33 86 60 50 43 86 33 40 33 20 13 86 86 66 30 60 33 73 90 40 40 73 20 73 40 63 20 40 93 86 59
4150   53 81 93 74 88 58 95 79 65 81 62 86 51 48 48 90 46 55 37 53 62 79 69 62 20 60 48 69 81 48 30 81 37 72 30 44 18 44 97 90 62
4250   51 72 94 76 89 85 90 82 84 90 70 89 64 65 56 91 50 73 26 36 47 90 87 76 28 73 53 77 88 56 50 89 51 68 57 59 28 67 90 87 69
4340   74 69 86 77 95 73 90 84 75 84 67 83 47 59 49 85 64 53 26 44 37 93 85 65 30 82 70 79 85 48 51 89 55 79 65 67 22 62 87 84 67
4350   38 79 92 85 92 79 90 81 83 90 64 90 57 70 64 90 44 61 31 49 45 93 87 75 45 72 42 76 96 50 40 88 27 71 50 72 23 66 92 90 68
4390   88 81 ** 81 92 70 96 77 74 92 74 97 62 55 40 88 77 92 55 55 48 ** 88 74 44 81 74 77 ** 59 37 96 29 66 66 77 33 70 ** 96 74
4391   61 ** ** 77 83 83 94 83 72 83 77 77 55 66 38 ** 72 83 27 50 66 ** 83 83 50 88 72 72 94 61 33 88 88 66 88 83 38 55 ** ** 75
4400   60 85 97 85 97 87 91 91 91 92 81 89 70 74 62 94 82 80 58 71 61 98 91 74 64 75 74 87 88 55 50 95 34 91 62 72 60 65 97 94 78
4550   72 60 ** 76 ** 92 ** 34 ** 96 64 96 80 52 68 92 96 88 56 36 48 ** ** 60 20 76 96 96 ** 40 52 96 44 72 56 84  0 76 92 92 75
4322   65 60 91 79 82 91 91 56 62 86 21 82 56 34 30 86 26 47 30  4  4 91 91 69 30 95 69 86 95 39 52 86 17 82 34 52  8 60 91 86 61
```

```
 942 MATH LEVEL 4        TECR5035              11/07/86
PERCENTAGE OF CORRECT ANSWERS PER ITEM
NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY **

SCHL    1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 TOTAL

 4052  61 76 ** 80 85 71 90 71 85 95 57 90 47 71 52 ** 71 76 47 28 38 ** 90 80 57 85 80 66 85 66 47 ** 52 85 38 85 33 61 90 90 72
 4100  84 93 97 90 94 89 96 88 90 94 74 91 79 77 76 95 75 78 38 66 60 95 92 81 52 86 78 89 91 74 57 95 49 91 67 79 52 70 98 92 80
 4120  75 80 ** 95 ** 95 ** 80 90 95 80 ** 65 70 60 95 ** 50 75 65 80 90 95 80 75 80 40 85 ** 40 35 90 60 80 70 70 30 90 ** 95 78
 4121  63 72 ** ** ** 72 ** 81 ** ** 63 63 90 81 54 90 45 63  0 45 36 81 90 72 54 63 90 ** ** 81 45 72 72 72 18 63 18 63 ** 81 71
 4530  52 67 90 80 85 82 95 92 85 97 85 95 57 70 55 97 60 70 70 72 70 87 87 65 80 72 35 72 80 67 30 85 42 67 52 50 15 62 87 90 71
 4531  54 63 90 81 90 81 90 ** 81 ** 90 90 72 ** 90 ** 63 ** 54 63 45 ** ** 81 54 90 63 81 90 72 54 ** 54 90 81 81 27 63 ** 90 79
 4590  61 78 93 80 91 85 95 85 93 ** 70 89 55 53 59 95 74 59 19 34 63 93 89 68 17 74 93 82 93 70 42 93 51 78 34 53 29 59 93 91 71
 4592  55 88 ** ** 77 66 ** 68 77 88 77 77 66 77 44 88 66 77 22 33 77 88 88 77 55 ** 66 77 ** 88 44 ** 33 66 55 66 22 77 ** ** 74
 4630  61 74 93 82 95 82 95 95 85 92 79 95 59 76 60 90 66 76 35 51 51 95 91 78 49 83 70 73 92 53 36 92 44 65 58 77 34 66 91 91 73
 DISC  65 78 94 82 91 81 93 85 84 91 71 89 63 67 58 92 62 70 38 51 52 93 88 73 44 77 66 80 90 57 44 90 44 76 55 69 32 65 93 90 72

 4260  54 64 ** 70 91 85 97 91 89 93 66 95 54 68 60 91 47 81 35 43 35 93 95 68 45 58 75 75 89 54 25 93 70 70 14 62 14 66 97 87 69
 4280  69 76 95 82 93 80 90 82 83 89 73 89 53 78 60 95 52 79 49 75 60 93 86 71 63 82 73 86 84 60 49 89 50 67 56 75 35 65 93 84 74
 4283  71 72 94 87 92 82 94 88 85 95 81 92 61 57 48 91 60 65 21 20 31 95 95 84 35 80 40 80 92 48 41 90 37 75 60 82 52 68 97 97 71
 4381  90 95 ** ** ** 95 95 90 ** ** 61 90 57 66 42 ** 33 85  4 38 23 ** 95 95 80 85 90 85 95 80 28 90 52 95 38 90 57 71 90 95 77
 4540  49 67 91 78 88 78 93 37 76 83 55 89 49 60 44 80 47 51 27 24 23 91 83 77 36 63 47 64 78 47 27 88 37 69 40 60 18 60 90 83 62
 4650  71 90 92 77 92 86 96 89 90 89 63 88 60 71 63 90 46 80 25 49 38 92 90 75 60 86 67 86 90 66 58 88 54 85 62 78 37 71 94 91 74
 4062  78 93 96 75 81 87 93 87 96 87 66 84 75 75 81 81 96 96 93 57 63 87 87 81 63 87 72 ** ** 96 63 ** 93 ** 48 ** 93 81 84 96 85
 4321  60 90 ** 68 92 76 72 92 80 ** 52 92 84 48 60 92 28 72 24 48 20 ** 96 72 40 84 52 84 88 52 44 88 40 84 60 60 28 56 ** 88 68
 4322  50 62 89 64 89 77 93 77 77 89 61 86 61 62 45 74 57 67 37 47 45 91 88 77 35 67 55 77 88 44 33 83 49 61 40 66 32 62 96 86 66
 4361  81 93 ** 93 ** ** 93 93 ** 93 87 ** 75 81 75 93 87 93 18 62 25 ** 93 81 68 93 81 87 ** 81 56 93 18 68 75 87 56 81 ** 87 81
 4541  50 85 97 77 95 87 92 82 87 92 67 97 50 47 40 97 25 65 27 32 30 90 87 70 22 67 67 77 95 52 40 90 32 62 60 60 30 60 90 95 66
 4543  60 63 97 81 94 89 94 89 97 92 84 94 65 81 57 92 57 60 31 39 39 ** 97 76 34 89 44 84 97 44 42 ** 26 81 47 71 15 71 97 92 71
 DISD  63 76 94 78 91 83 93 86 86 90 67 90 59 66 55 88 51 71 33 43 37 93 90 76 46 76 60 80 89 57 42 90 47 75 49 72 35 66 93 89 71

 4053  79 86 ** 86 93 89 96 89 93 ** 68 89 75 72 62 96 72 58 44 55 58 96 89 65 41 79 55 79 ** 37 48 93 34 86 44 86 41 62 86 79 74
 4061  73 92 92 90 90 85 90 95 92 92 75 95 73 73 68 ** 78 80 58 56 60 ** 97 90 73 85 82 92 ** 78 63 ** 63 87 78 90 48 78 ** 92 82
 4113  46 72 96 78 87 78 87 76 60 84 54 93 60 63 51 ** 72 75 39 57 48 ** 93 72 66 81 63 87 93 75 45 90 45 72 63 66 42 60 87 87 72
 4210  70 79 95 97 88 93 97 90 97 95 88 93 65 88 75 ** 68 93 43 75 56 95 95 65 56 90 65 84 ** 63 38 97 34 90 34 81 54 75 ** 93 79
 4230  61 87 95 85 94 94 93 85 91 94 71 90 76 68 63 98 58 77 27 52 51 97 91 79 52 81 71 79 98 62 51 94 48 85 63 79 34 74 99 95 76
 4271  60 85 95 90 95 92 97 85 95 95 75 97 70 47 77 97 60 72 52 62 32 95 97 77 50 95 82 87 ** 80 42 90 27 92 72 87 30 72 97 97 77
 4360  40 42 68 77 48 82 51 80 51 54 37 54 45 31 48 57 65 57 51 17 14 62 60 48 51 48 48 77 71 34 48 60 40 54 45 57 37 54 94 57 53
 4410  70 77 93 88 93 88 95 96 95 98 83 93 72 80 53 96 80 79 45 69 80 ** 88 83 41 85 67 88 96 83 43 98 59 87 77 83 29 75 98 86 80
 4580  64 90 95 92 91 89 89 84 79 91 69 88 68 65 56 88 46 68 37 33 48 92 91 73 46 78 66 87 94 55 48 94 52 92 64 79 37 67 97 94 73
 4620  68 81 98 86 91 89 91 90 91 97 80 93 68 79 58 86 73 76 40 53 58 95 93 75 42 78 58 73 92 59 37 86 30 73 43 68 32 68 93 92 73
 DISE  64 82 94 87 89 89 90 87 86 92 72 90 69 68 61 92 65 75 40 52 52 94 90 75 50 80 66 82 95 63 46 91 45 83 59 78 37 70 96 90 75

 DISA  69 79 96 83 89 86 93 90 86 94 76 90 65 71 62 90 58 76 40 48 49 92 88 71 39 78 68 81 91 58 45 90 47 78 56 68 33 64 91 86 73
 DISB  68 82 94 83 92 85 93 90 88 92 72 91 67 67 60 93 52 60 33 42 42 91 88 76 44 78 64 81 94 60 39 90 50 76 53 67 32 67 92 87 72
 DISC  65 78 94 82 91 81 93 85 84 91 71 89 63 67 58 92 62 70 38 51 52 93 88 73 44 77 66 80 90 57 44 90 44 76 55 69 32 65 93 90 72
 DISD  63 76 94 78 91 83 93 86 86 90 67 90 59 66 55 88 51 71 33 43 37 93 90 76 46 76 60 80 89 57 42 90 47 75 49 72 35 66 93 89 71
 DISE  64 82 94 87 89 89 90 87 86 92 72 90 69 68 61 92 65 75 40 52 52 94 90 75 50 80 66 82 95 63 46 91 45 83 59 78 37 70 96 90 75
 STUT  66 79 94 83 91 85 93 88 86 92 71 90 64 68 59 91 58 70 37 47 47 93 89 74 45 78 65 81 91 59 43 90 46 77 54 70 34 66 93 89 72
```

MATHEMATICS - LEVEL 5

INSTRUMENT AND POPULATION DESCRIPTION

This is a forty-item multiple choice test measuring selected circled objectives in the curriculum strands of Numbers/Numeration (2 items), Computation (6 items), Fractions (12 items), Decimals/Percents (5 items), Measurement (7 items), Geometry (4 items), and Estimating/Graphs (4 items). The test serves as both the final examination and the State Basic Skills Test for grade 5 students.

The population includes all students enrolled in grade 5 who took an on-level test and for whom valid answer sheets were turned in.

SYSTEM STRENGTHS AND WEAKNESSES

Overall, performance on this test was fair with a system-wide average score of 65% Generally, students appear to be mastering the objectives measured in the Numbers/Numeration and Computation subtests and most of the objectives tapped in Decimals/Percents, Measurement, Geometry, and Estimating/Graphs. However, within those subtests, there are isolated objectives which are not being mastered by more than fifty percent of the students. Within Decimals/Percents students are having difficulty with dividing decimals and mixed decimals. Within the Measurement domain students are not mastering the objectives involving English units of measurement. In Geometry the difficulty lies with finding the area of a rectangle or a square. In Estimating/Graphs only 44% of the students were able to round off mixed decimals to the nearest whole number.

The most severe deficits as a strand lie in Fractions where of twelve items, there are ten that fewer than 60% of the students answered correctly. The objectives measured by these items are adding, subtracting, dividing, and multiplying of fractions and mixed fractions and solving word problems involving fractions.

BOSTON PUBLIC SCHOOLS

DEPARTMENT OF EDUCATIONAL TESTING

CURRICULUM REFERENCED FINAL

MATHEMATICS - LEVEL 5

1985 - 1986

NUMBERS AND NUMERATION	1	A.1	Writing numerals to the hundred millions place
	2	A.3	Identifying place value to the hundred millions place
COMPUTATION	3	B.4	Multiplying 4-digit multiplicands by 1-digit multipliers
	4	B.6	Dividing 3-digit numbers by 2-digit numbers with remainder
	5	B.9	Finding the average of a set of 2-digit numbers
	6	B.1	Adding columns of four 4-digit nos. or three 5-digit nos.
	7	B.16	Solving one and two-step word problems
	8	B.15	Finding the missing info. needed to solve a word problem
FRACTIONS	9	C.2	Shading in a fractional part of a whole unit
	10	C.6	Identifying fractions equivalent to one half, one third,etc.
	11	C.10	Multiplying common fractions with cancellation
	12	C.13	Dividing common fractions
	13	C.18	Solving one and two-step word problems
	14	C.5	Adding and subtracting common fractions with unlike denoms.
	15	C.8	Adding and subtracting mixed nos. with like denominators
	16	C.9	Subtracting a common fraction from a one-digit whole no.
	17	C.11	Multiplying a common fraction and a whole number
	18	C.12	Multiplying a mixed no. by a common fraction
	19	C.14	Dividing fractions by whole numbers and vice-versa
	20	C.17	Solving simple proportion probs. in fraction and ration form
DECIMALS AND PERCENTS	21	D.5	Adding and subtracting decimals and mixed decimals
	22	D.6	Multiplying simple decimals and mixed decimals
	23	D.7	Dividing decimals and mixed decimals of two digits
	24	D.10	Solving one and two-step word problems
	25	D.9	Applying the complementarity of percents to 100%
MEASUREMENT	26	E.1	Calculating elapsed time given two points in time
	27	E.3	Telling the no. of days in ea. month and order of the months
	28	E.6	Adding and subtracting English linear measurements
	29	E.7	Adding and subtracting metric linear measurements
	30	E.8	Adding and subtracting English units of capacity
	31	E.14	Identifying the appropriate measuring instrument for a task
	32	E.13	Memorizing the boiling and freezing points of water; Celsius
GEOMETRY	33	F.1	Identifying terms dealing with lines given a map or drawing
	34	F.7	Identifying where these shapes appear in the real world
	35	F.11	Finding the perimeter of polygons
	36	F.12	Finding the area of a rectangle or square
ESTIMATING/ GRAPHS	37	G.2	Rounding off mixed decimals to the nearest whole number
	38	G.5	Using picture, bar and line graphs to answer questions
	39	G.3	Estimating answers to word problems by rounding off
	40	G.1	Rounding off whole numbers

```
 952 MATH LEVL 5        TECP5005            11/07/86
PERCENTAGE OF CORRECT ANSWERS PER ITEM
NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY **

SCHL     1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 TOTAL

4160    95 80 92 83 71 95 97 80 97 88 69 57 45 57 59 47  9 47 54 35 78 71 57 97 85 66 83 59 21 66 ** 50 52 78 85 66 52 92 76 88 69
4170    94 88 76 35 41 88 82 94 94 47 23 17 47  5 41 17  0 17  5 35 35 41  0 94 64 70 94 47 17 41 70 64 58 82 82 64 17 88 64 88 53
4173    90 67 96 67 25 ** 83 87 87 64 61 51 51 35 51 29 45 41 51  6 80 64 45 90 90 64 67 48 22 38 70 77 16 90 67 54 41 83 58 70 61
4220    ** 75 81 93 75 87 81 87 87 62 50 37 56 50 75 18 43 56 43 18 87 56 37 81 56 81 56 43  6 50 93 56 81 93 67 25 43 87 68 87 64
4221    97 79 91 79 55 91 91 79 82 76 79 79 67 67 82 70 70 61 64 50 82 73 50 85 61 70 79 50 29 52 73 44 55 88 73 58 47 73 79 76 70
4570    92 68 92 74 56 86 90 96 94 64 39 31 39 31 45 39 33 33 25 45 60 60 33 90 56 60 72 50 39 41 68 80 62 86 74 41 39 86 52 76 60
4571    97 81 93 85 72 89 93 ** 93 66 77 64 72 41 70 45 47 79 64 54 75 75 33 95 85 89 79 83 50 77 91 79 81 93 81 77 50 95 66 89 76
4010    94 68 81 62 44 85 87 82 82 58 28  2 22 24 35 20 12 34 21 11 58 52 25 85 50 58 67 35 20 20 80 58 70 88 32 25 25 80 45 84 50
4240    94 66 90 80 53 92 84 94 84 65 68 41 60 40 50 30 22 46 52 40 89 53 38 90 74 70 78 65 25 34 82 69 77 80 64 48 40 92 49 76 63
4241    ** ** ** ** 70 ** ** 90 ** ** 60 70 80 30 90 90 70 60 60 90 90 90 60 ** ** 80 ** 60 50 20 ** 80 ** 80 70 60 90 ** 80 ** 81
4270    95 83 93 81 71 97 89 91 83 75 67 51 55 38 61 61 63 42 53 51 81 63 53 91 75 55 89 63 40 59 87 71 81 87 69 65 40 89 51 81 70
4310    ** ** 87 50 50 87 75 87 87 75 87 37 75 37 62 62 87 87 37 ** 50 50 87 ** ** 37 ** 62 25 87 ** 75 87 ** 87 25 75 ** 62 87 74
4311    ** 57 71 47 19 71 90 85 90 47  9 23 28 14 42 19 14 19 23 47 61 33 23 85 66 52 71 33 14 47 90 57 95 80 76  4 23 90 57 71 51
4370    93 93 ** 93 56 ** 81 ** ** 87 75 56 75 43 81 56 62 56 68 81 ** 75 81 ** 56 87 87 93 87 87 81 81 75 81 81 75 12 93 87 ** 79
4371    ** 72 ** ** 61 ** ** ** 94 ** ** 33 38 61 88 50 55 38 27 38 83 94 44 94 88 ** 77 72 33 72 94 55 55 77 88 33 50 ** 83 ** 74
4430    ** ** 80 ** 70 ** ** ** ** 50 80 50 70  0 60 50 60 70 40 80 90 70 80 90 ** 90 ** 70 70 40 90 90 ** ** 80 ** 70 ** 60 ** 78
DISA    95 75 89 76 55 91 89 90 89 68 58 41 51 37 57 40 36 46 43 40 75 62 41 91 71 68 78 57 31 48 83 66 68 86 69 50 40 88 60 82 65

4030    ** 80 80 66 73 86 93 93 93 80 26 60 33 66 46 46 73 40 26 53 60 26 46 73 60 66 80 33 20 40 93 20 80 93 73 53 66 93 80 80 64
4331    ** 92 ** 92 69 92 69 ** 92 84 76 61 84 69 92 61 46 61 69 30 84 61 46 ** 84 76 84 69 46 76 92 76 92 92 92 53 61 ** 69 84 77
4081    ** 76 ** 88 57 84 96 ** 88 88 73 57 80 73 69 73 69 69 ** 65 84 84 96 ** ** 92 69 92 15 80 96 92 80 92 92 50 69 ** 80 92 81
4082    ** ** 87 62 50 81 93 75 68 50 56 18 56 37 37 31 50 50 37 18 62 50 68 75 56 43 50 37 18 18 68 56 50 81 81 43 18 75 68 81 56
4290    96 74 92 80 72 85 87 90 92 63 56 52 61 27 45 36 49 69 65 36 85 70 65 78 78 72 78 60 14 38 78 50 63 87 81 41 60 87 70 83 67
4560    97 77 88 75 64 93 86 84 86 71 86 64 37 73 66 53 62 51 55 57 80 66 44 68 73 71 64 48 42 37 95 66 73 88 82 68 62 91 82 84 71
4561    95 71 ** 76 38 ** 85 85 95 90 52 52 38 47 66 38 28 47 28 23 61 38  9 95 61 71 76 47 19 38 95 71 57 90 76 66 38 90 52 85 62
4690    96 83 96 85 56 90 93 88 98 76 35 20 36 38 63 33 16 26 35 30 58 53 15 90 80 55 70 35  8 28 81 65 73 73 86 33 46 85 50 78 59
4070    ** 66 78 75 60 96 87 87 81 72 66 60 42 24 57 48 69 45 66 66 72 60 63 93 72 54 81 84 54 69 78 66 66 81 78 51 27 75 36 57 67
4080    63 72 68 68 27 59 63 63 68 45 27 77 45 22 40 81 36 50 45 18 68 86 18 54 54 45 59 72 22 36 63 18 36 63 27 72 54 77 59 63 52
4151    97 86 95 86 61 97 94 98 94 78 73 67 57 46 78 49 39 73 54 54 86 73 46 93 80 78 83 61 34 46 93 69 68 90 73 68 49 95 54 89 73
4190    94 81 92 68 53 94 90 94 75 53 44 53 44 33 57 55 24 55 40 50 81 53 16 94 77 75 72 83 16 81 85 77 72 83 77 55 31 94 55 74 65
4192    ** 74 81 85 70 92 85 ** 88 81 55 40 44 33 40 33 25 22 44 37 59 37 25 92 74 74 88 62 22 25 81 77 51 88 74 44 40 88 66 85 62
4200    ** 81 ** 81 81 ** ** 93 ** 68 87 56 43 31 87 43 18 43 68 56 87 81 18 93 87 87 81 75 56 68 93 37 62 87 93 56 62 93 62 93 73
4201    95 69 82 82 73 91 86 ** 86 ** 69 56 78 69 56 ** 78 65 78 43 86 86 73 78 82 73 86 60 43 73 91 78 82 82 52 56 65 86 34 69 75
4670    ** 57 94 52 31 89 89 ** 89 73 15  5 15 15 57  5 15  5 10 31 57 52 26 84 73 68 57 63 63 84 94 ** ** ** 89 89 84 ** 89 89 63
DISB    96 78 90 78 59 90 88 91 88 72 57 51 49 43 60 48 42 51 52 44 75 62 41 87 76 69 74 61 28 50 86 65 69 85 77 55 50 89 61 80 67

4351    ** ** ** 80 25 ** ** 95 95 85 90 95 90 80 40 70 65 85 80 85 85 90 85 95 85 85 85 55 50 50 90 55 50 85 ** 90 75 **  0 ** 79
4130    91 73 97 71 67 97 95 91 97 80 56 23 47 52 58 19 30 34 39 19 84 60 50 97 67 65 89 56 21 26 82 34 69 80 69 32 36 89 69 91 63
4131    95 35 70 30 30 95 75 ** ** 70 60 10 50 15 40 20 25 20 35 25 50 60  5 ** 75 75 30 70 10 40 80 60 70 90 55 40 15 ** 45 55 53
4140    ** 40 85 70 59 92 74 70 77 44 18  3 33 29 22  3 33 18 25  0 70 62 14 74 51 59 55 29  7 18 74 51 59 81 40 25 22 88 48 44 47
4150    96 70 87 67 51 87 83 90 93 83 51 45 32 35 48 54 38 38 32 70 64 54 64 90 80 64 67 77 51 58 96 74 70 77 64 32 51 93 58 87 66
4250    ** 86 98 86 70 98 88 84 88 66 43 52 60 37 60 50 47 62 68 54 66 76 25 94 82 68 86 70 43 41 90 66 70 86 72 56 49 90 56 92 69
4340    93 58 88 71 31 90 85 87 85 57 37 11 33 35 27 23 41 33 17 21 52 45 23 87 52 57 66 35  3 15 78 60 52 87 56 10 23 85 52 78 51
4350    98 77 89 80 32 91 87 93 89 79 40 37 40 36 65 36 44 40 33 19 60 62 39 87 74 68 65 46  9 39 88 51 51 88 47 37 29 91 58 86 59
4390    95 86 95 ** 56 95 91 91 73 65 30 60 65 60 73 52 82 30 52 30 47 82 17 95 78 78 91 52 21 47 91 78 ** ** 95 82 43 86 69 ** 71
4391    ** 80 86 86 73 ** 93 93 ** 80 40 20 66 53 60 66 40 53 26 66 ** 20 40 86 86 93 93 73 13 36 ** 26 93 93 93 26 93 93 53 93 71
4400    96 81 91 69 74 90 73 91 30 74 60 51 48 37 68 41 56 51 54 26 72 65 43 93 76 74 80 69 25 54 87 67 80 91 92 71 58 87 58 86 69
4550    96 83 92 77  7 85 85 96 89 70 29 77 88 59 66 92 40 74 51 33 85 **  3 92 74 81 66 37 11 25 ** 51 85 74 88  0 59 92 55 92 67
4022    ** 50 91 50 25 75 91 ** 83 53  0  8 33 16 16 25  8 16 41 25 91 66 41 58 58 58 75 25  0 25 ** 83  8 75 58  8 41 83 41 ** 50
```

```
 952 MATH LEVEL 5          TECK5J05                 11/07/86
PERCENTAGE OF CORRECT ANSWERS PER ITEM
NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY **

SCHL     1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 TOTAL

 4052   ** ** ** ** ** 92 ** ** ** 92 64 28 57 42 78 78 71 57 42 42 78 92 28 ** 85 85 ** 64 50 71 ** 64 85 92 ** 50 71 ** 57 ** 78
 4100   95 78 92 82 70 90 90 98 89 77 55 51 57 47 68 52 44 58 37 44 80 65 41 90 83 75 80 69 63 65 86 54 71 88 74 54 48 86 64 81 70
 4120   95 66 80 71 71 ** 95 85 ** 80 61 61 76 61 85 57 52 66 57 47 ** 76 80 90 90 61 90 80  0 61 90 52 80 ** 95 80 57 90 76 80 75
 4121   ** 81 ** 72 81 ** 90 ** 90 72 45 36 72 63 45 54 63 18 18 27 54 54 36 81 81 54 72 45 54 18 ** 63 45 90 45 27 27 ** 63 90 63
 4530   96 80 ** 83 40 90 83 90 93 83 40  6 40 43 63 33 36 20 10 16 93 16 23 93 80 76 93 40  6 36 86 53 50 83 76 23 50 86 76 90 59
 4531   88 47 82 58 41 94 82 88 ** 70 23  5 41 41 47 58 52 52 29 23 70 58 11 70 70 47 70 41 29 23 88 64 35 76 64 29 29 88 64 82 56
 4590   ** 84 97 76 53 92 ** 89 82 76 61 46 69 43 71 64 76 58 69 56 73 76 33 82 89 71 84 64  2 48 92 84 92 94 84 43 61 92 43 69 71
 4592   ** ** ** 75 75 ** ** ** ** ** 75 25 75 75 ** 75 50 25 75 50 ** 50 25 ** ** 50 ** **  0 75 ** ** ** 75 ** 50 ** ** 50 ** 78
 4630   98 93 97 91 85 98 97 96 97 92 82 73 76 73 84 75 65 66 60 57 85 61 56 89 91 83 74 70 20 60 80 53 52 82 73 33 35 87 61 83 75
 DISC   96 76 92 77 56 92 88 91 90 75 50 41 54 45 60 47 48 48 45 36 73 63 38 89 76 71 76 58 24 44 87 58 66 86 72 41 44 89 57 84 65

 4260   ** 75 93 87 65 90 90 87 90 68 59 50 46 53 65 31 56 37 34 34 81 68 53 78 84 65 87 68 31 46 84 37 65 ** 62 65 18 87 56 87 66
 4280   ** 90 94 84 70 98 94 88 88 82 78 64 66 52 64 56 64 60 64 45 82 74 47 94 88 78 76 78 56 64 88 82 78 88 84 49 64 86 70 86 75
 4283   93 77 81 75 63 81 86 93 95 84 47 29 50 40 59 50 34 45 29 59 75 45 36 93 84 81 86 61 45 54 95 52 56 81 70 29 52 95 75 81 65
 4381   ** 62 87 62 31 87 93 81 93 56 12 18  0 12 18 12  0 37  6  6 43 25  6 81 81 68 87 62 12 31 ** 62 37 75 81 18 25 93 43 93 50
 4640   95 65 81 78 29 87 78 85 88 63 30 28 27 21 47 24 16 27 43  9 55 41 30 84 61 60 77 29  5 22 81 50 51 90 63 14 29 85 60 78 52
 4650   94 82 87 78 47 88 92 94 95 85 59 32 48 40 56 44 33 38 40 33 65 57 13 88 84 77 76 69 22 47 88 67 68 81 65 52 41 94 64 88 64
 4062   94 85 76 73 61 85 97 ** 97 91 61 47 64 32 55 41 55 47 47 58 70 64 35 91 91 79 88 64 41 61 97 73 79 97 94 47 67 ** 73 97 72
 4321   ** 58 ** 82 41 82 94 ** 94 88 58 47 64 47 76 70 58 35 52 23 82 70 64 82 ** 88 ** 64 52 58 94 64 52 94 47 76 35 94 70 88 71
 4322   96 76 78 62 45 88 80 96 84 70 54 39 39 47 60 33 60 39 35 19 62 43 25 90 60 58 78 35 23 27 76 54 33 82 72 27 52 78 54 80 58
 4361   ** 56 87 75 50 68 87 93 87 68 87 62 50 25 62 37 62 37 50 37 50 81 31 87 62 50 81 43  6 31 75 75 43 87 75 25 37 93 43 75 61
 4541   ** ** 71 66 23 95 80 95 ** 57 19 14 42 19 47 33  9 23 33  9 61 66  4 90 71 61 38 47  9 19 ** 76 52 85 80 38 47 ** 52 95 56
 4543   ** 56 92 52 24 96 96 96 ** 64  8  8 32 48 48 24 76 20 40 24 52 44 36 92 68 64 88 48  4 12 84 72 40 84 56 64 36 96 44 96 57
 DISD   96 76 85 75 47 88 88 92 92 75 50 36 44 37 55 38 42 38 41 30 65 55 29 88 77 70 79 55 25 40 87 62 58 86 70 40 43 90 61 86 62

 4353   ** 94 ** 82 70 88 94 94 94 82 82 88 70 64 64 41 35 64 70 52 82 94 52 94 76 82 58 41 17 64 ** 23 52 94 82 11 29 94 70 ** 71
 4061   93 90 88 81 65 90 88 93 90 74 60 30 58 39 67 46 48 55 20 18 74 55 25 97 79 79 62 46 11 39 93 62 72 90 67 48 41 86 76 86 65
 4113   ** 78 95 52 30 82 91 95 91 86 65 69 60 52 39 56 73 69 73 91 86 73 52 95 69 65 82 65 21 56 91 78 ** 78 86 78 39 91 69 86 73
 4210   ** 75 87 67 67 95 90 90 95 75 77 35 35 32 72 30 12 35 27 25 97 75 27 92 82 67 82 57 15 35 92 67 75 87 70 50 27 90 67 87 64
 4230   99 78 90 78 54 92 91 95 94 78 56 40 53 39 64 42 37 47 41 37 65 64 35 93 74 78 87 64 20 47 86 67 73 90 70 52 42 93 52 75 66
 4271   97 88 82 80 65 85 91 ** 97 74 71 51 54 48 54 65 45 54 62 17 74 77 37 91 74 71 80 62 28 51 91 65 77 91 94 51 42 97 60 94 70
 4360   ** 73 78 68 50 89 92 92 89 63 44 39 28 13 50 47 13 42 42 52 71 47 21 94 76 76 97 52 39 42 89 52 71 94 68 47 50 86 76 84 62
 4410   97 85 94 85 60 92 85 98 94 85 71 76 57 55 59 49 40 44 56 50 56 59 56 85 85 63 86 46 10 53 88 66 72 86 84 56 69 92 66 88 70
 4580   96 81 90 68 56 93 93 89 90 75 36 41 51 35 60 46 45 49 48 46 82 65 45 88 72 73 72 61 30 54 85 62 65 84 78 46 44 88 61 78 65
 4610   **  0 ** **  0 ** ** ** ** **  0  0 **  0 **  0  0  0 **  0 ** ** **  0 ** ** **  0  0  0 ** ** ** ** ** **  0 **  0  0 60
 4620   96 75 93 82 50 92 89 89 86 70 46 50 37 46 60 42 62 36 56 26 85 60 18 91 69 74 73 64 21 43 69 59 51 86 74 37 46 91 68 91 64
 DISE   97 80 90 76 56 91 90 93 92 76 56 48 49 41 60 45 42 47 47 39 75 64 36 91 75 73 79 58 21 48 86 63 69 88 76 48 45 91 64 84 66

 DISA   95 75 89 76 55 91 87 90 89 68 58 41 51 37 57 40 36 46 43 40 75 62 41 91 71 68 78 57 31 48 83 66 68 86 69 50 40 88 60 82 65
 DISB   96 78 90 78 59 90 88 91 88 72 57 51 49 43 60 48 42 51 52 44 75 62 41 87 76 69 74 61 28 50 86 65 69 85 77 55 50 89 61 80 67
 DISC   96 76 92 77 56 92 88 91 90 75 50 41 54 45 60 47 48 48 45 36 73 63 38 89 76 71 76 58 24 44 87 58 66 86 72 41 44 89 57 84 65
 DISD   96 76 85 75 47 88 88 92 92 75 50 36 44 37 55 38 42 38 41 30 65 55 29 88 77 70 79 55 25 40 87 62 58 86 70 40 43 90 61 86 62
 DISE   97 80 90 76 56 91 90 93 92 76 56 48 49 41 60 45 42 47 47 39 75 64 36 91 75 73 79 58 21 48 86 63 69 88 76 48 45 91 64 84 66
 STOT   96 77 90 76 55 91 89 91 90 73 54 43 50 41 59 44 43 46 46 38 73 61 37 89 75 70 77 58 26 46 86 62 66 86 73 46 44 90 60 83 65
```

MATHEMATICS - LEVEL 6

INSTRUMENT AND POPULATION DESCRIPTION

This is a forty-item multiple choice test measuring selected circled objectives in the curriculum strands of Numbers/Numeration (4 items), Computation (5 items), Fractions (10 items), Decimals/Percents (9 items), Measurement (4 items), Geometry (4 items), and Estimating/Graphs (4 items).

The population includes all students enrolled in grade 6 who took an on-level test and for whom valid answer sheets were turned in.

SYSTEM STRENGTHS AND WEAKNESSES

Overall, students performed poorly on this test with a system-wide average score of 57%. Generally, students appear to be mastering the objectives in the subtests of Numbers/Numeration and Computation, but there are isolated objectives in the strands of Decimals/Percents, Mesurement, Geometry, and Estimating/Graphs that a significant percentage of students are not mastering. Within the Decimals/Fractions strand, students are having difficulty with arranging decimals in order of size, changing common fractions with terminating decimals, and finding the percent of a whole number. Within Measurement students are not mastering the objectives concerned with renaming improper English and Metric linear measures. In Geometry the difficulty lies with finding perimeters and identifying terms dealing with lines. In Estimating/Graphs only 38% of the students are able to obtain information from a table or schedule or from bar, line, or circle graphs.

The most severe deficits as a strand lie in Fractions where of 10 items, there are eight that fewer than 60% of the students answered correctly. The objectives measured by these items are adding, subtracting, dividing, and multiplying common and mixed fractions.

BOSTON PUBLIC SCHOOLS

DEPARTMENT OF EDUCATIONAL TESTING

CURRICULUM REFERENCED FINAL MATHEMATICS - LEVEL 6

1985 - 1986

A.5	Arranging integers in order	1	
A.8	Identifying nos. divisible by 2,3,4, etc. and odd or even	2	
A.3	Identifying place value to the billions place	3	
A.11	Writing exponents in words and vice-versa	4	
B.3	Multiplying 4-digit nos. by 3-digit nos., vert. or horiz.	5	
B.4	Dividing 4-digit nos. by 2-digit nos.	6	
B.7	Finding the average of a set of 2-digit nos.; word prob.	7	
D.9	Writing fractions and mixed nos.	8	
B.10	Solving computations with 2 exponents to the power	9	
C.15	Solving one and two-step word problems	10	
B.17	Solving one and two-step word problems	11	
C.5	Add and subtract common fractions with unlike denoms.	12	
C.6	Finding a fractional part of a large number	13	
C.7	Adding mixed nos. with like denoms; regrouping	14	
C.8	Subtracting mixed nos. with like denoms.; regrouping	15	
C.9	Add and subtract mixed nos. with unlike denoms; no regroup	16	
C.10	Multiplying 2 or 3 common or mixed fractions, or whole no.	17	
C.10		18	
C.11	Dividing common or mixed fractions or whole nos.	19	
C.13	Solving ration and proportion problems	20	
D.1	Writing mixed decimals in words to the ten thousandths	21	
D.3	Arranging decimals in order of size	22	
D.6	Add and subtract decimals and mixed decimals w/diff. nos.	23	
D.7	Multiplying decimals with 2-digit multipliers	24	
D.8	Dividing decimals with 1-digit divisors	25	
D.10	Changing common fractions with terminating decimals	26	
D.12	Changing decimals to the hundredths place to percents	27	
D.17	Finding the percent of a whole number	28	
E.2	Renaming improper measures of time with two measures	29	
E.10	Knowing an approximate Celsius temperature reading	30	
E.6	Renaming improper English and metric linear measures	31	
E.6		32	
F.6	Identifying ten two-dimensional figures	33	
F.11	Finding the perimeter of a square, rectangle or triangle	34	
F.1	Identifying terms dealing with lines given map or drawing	35	
F.14	Identifying center, diameter, radius, chord & circumference	36	
G.1	Rounding off whole numbers to any place	37	
G.4	Identifying probablility in word problems	38	
G.8	Getting information from a table or schedule	39	
G.5	Using picture, bar, line and circle graphs	40	

```
 962 MATH LEVEL 6        TECR5005              11/07/86
PERCENTAGE OF CORRECT ANSWERS PER ITEM
NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY **

SCHL    1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 TOTAL

 2130  47 68 80 76 73 81 55 43 49 53 68 52 52 53 37 74 59 49 46 46 60 35 58 81 50 30 76 52 72 22 61 44 60 50 52 50 58 34 34 74 55
 2170  66 74 86 90 73 85 73 55 39 66 63 50 45 46 41 63 48 51 54 55 62 21 48 64 44 34 70 43 80 24 63 42 49 49 48 46 65 33 33 73 55
 4570  25 62 70 96 85 88 37 29 33 55 66 37 25 25 37 74 37 55 18 25 37  7 29 62 44 14 70 29 81 29 55 29 37 40 59 29 55 22 40 62 45
 2060  73 68 73 89 94 89 68 42 65 73 78 42 65 50 47 76 50 68 57 71 57 57 71 65 60 47 60 55 78 50 68 55 71 65 60 42 57 50 39 64 63
 2370  43 64 77 87 76 85 62 53 45 72 63 53 54 48 43 72 44 43 44 42 59 26 39 70 56 26 81 40 76 22 54 39 56 49 53 46 52 37 27 65 54
 2240  43 45 76 88 58 75 50 26 47 58 52 33 36 25 25 51 37 48 27 34 37 12 41 51 38  5 55 45 68 19 37 41 54 43 52 43 45 25 29 68 43
 DISA  50 65 79 86 74 83 60 46 46 65 64 48 49 45 39 68 48 49 44 46 56 27 47 69 50 27 73 45 75 24 57 42 55 49 52 45 56 34 31 70 53

 2110  53 55 68 86 66 82 62 64 44 68 60 46 60 53 23 71 51 60 57 48 44 24 60 60 46 17 77 66 75 15 51 26 68 48 46 53 42 11 33 64 53
 2120  44 44 66 73 58 64 50 35 35 51 53 30 33 26 22 53 29 42 14 34 37 17 32 33 25 12 53 32 57 21 47 38 51 47 46 38 47 38 23 56 40
 2140  79 88 94 91 90 94 90 58 47 84 75 69 64 59 53 84 64 62 42 60 65 36 67 64 56 39 74 50 84 36 72 61 68 68 62 70 66 51 54 76 66
 2200  59 73 87 90 78 81 77 69 52 64 58 66 66 56 54 82 63 58 53 52 66 20 55 75 60 66 75 53 77 40 65 63 78 65 56 75 61 33 34 76 63
 2950  84 70 85 96 64 82 79 72 76 79 69 59 66 69 73 73 64 74 64 57 81 73 71 78 75 47 73 73 79 77 67 58 72 82 67 70 71 54 45 79 71
 DISB  68 69 83 89 72 82 75 60 54 72 65 56 59 55 51 74 56 61 46 52 63 39 59 64 56 40 70 55 76 44 63 54 68 66 58 64 61 43 40 72 61

 2330  75 74 82 87 81 88 75 48 57 63 68 53 55 51 51 75 55 53 52 47 61 34 56 63 53 26 64 48 76 21 58 46 60 60 55 60 57 45 42 77 59
 2080  65 87 86 95 86 88 84 75 61 72 79 61 59 57 53 77 56 55 29 53 71 36 59 55 52 39 76 42 81 24 57 43 44 54 48 55 56 31 45 77 61
 2180  52 62 75 88 74 81 66 50 46 50 48 50 57 54 39 76 41 39 42 35 63 35 38 61 43 25 80 55 72 68 53 33 79 49 51 43 66 40 31 71 54
 2090  67 68 79 96 59 79 64 62 52 71 56 42 58 36 34 56 52 53 29 45 60 26 47 47 48 17 84 32 79 42 75 52 73 63 41 53 67 42 28 78 55
 2190  51 70 82 87 69 85 65 54 46 61 69 60 45 56 42 73 51 46 45 45 66 13 51 64 55 21 63 44 78 24 60 46 51 60 49 32 51 29 34 80 54
 2260  85 84 84 ** 83 83 84 51 77 77 56 81 66 38 34 69 36 62 51 31 72 44 56 60 32 39 77 59 78 46 60 57 59 68 65 44 40 36 61 81 62
 DISC  66 73 81 90 76 84 72 55 55 64 64 57 55 50 44 72 49 50 44 43 65 31 51 60 48 27 72 47 77 35 59 45 61 58 52 49 57 38 40 77 57

 2010  70 75 89 91 83 86 68 61 48 65 59 59 57 56 59 72 53 68 46 53 67 33 72 74 59 28 66 50 75 25 72 43 75 46 68 63 68 38 35 84 61
 2040  54 65 82 83 80 85 61 48 47 62 61 45 47 39 28 71 42 52 36 48 57 33 46 57 38 28 67 35 79 24 64 49 39 51 51 47 54 30 33 68 52
 2350  70 74 87 93 78 84 73 47 53 63 71 58 49 55 49 67 51 50 32 49 58 36 49 61 56 28 78 47 84 42 71 49 68 55 70 44 70 35 42 74 59
 DISD  65 72 86 89 80 85 68 51 49 63 65 54 50 50 45 70 49 55 37 50 60 34 54 63 51 28 71 44 80 32 69 48 60 51 63 50 64 34 37 75 57

 2100  46 68 72 83 67 76 67 47 40 62 55 42 47 34 36 50 34 35 32 51 63 16 42 42 32 18 59 37 64 19 48 42 56 63 48 44 55 37 40 60 48
 2270  51 62 75 81 72 84 60 38 20 54 53 38 25 25 34 51 28 39 28 38 49 12 42 44 26  8 50 18 71 25 50 26 50 39 49 19 47 33 45 72 43
 2980  90 75 88 96 81 84 86 69 65 82 77 73 65 56 63 81 57 63 67 60 79 36 66 83 75 38 68 52 86 36 76 59 74 75 66 65 70 50 57 86 69
 4360  76 88 90 93 79 80 90 55 58 61 52 58 52 46 46 69 39 66 38 49 57 22 44 46 34 22 53 31 77 28 68 44 58 68 52 57 65 36 19 69 56
 DISE  65 72 80 88 74 81 74 52 44 65 60 52 46 39 45 62 40 49 41 49 62 21 49 55 42 21 58 35 74 27 60 42 59 60 54 45 58 39 43 72 54

 DISA  50 65 79 86 74 83 60 46 46 65 64 48 49 45 39 68 48 49 44 46 56 27 47 69 50 27 73 45 75 24 57 42 55 49 52 45 56 34 31 70 53
 DISB  68 69 83 89 72 82 75 60 54 72 65 56 59 55 51 74 56 61 46 52 63 39 59 64 56 40 70 55 76 44 63 54 68 66 58 64 61 43 40 72 61
 DISC  66 73 81 90 76 84 72 55 55 64 64 57 55 50 44 72 49 50 44 43 65 31 51 60 48 27 72 47 77 35 59 45 61 58 52 49 57 38 40 77 57
 DISD  65 72 86 89 80 85 68 51 49 63 65 54 50 50 45 70 49 55 37 50 60 34 54 63 51 28 71 44 80 32 69 48 60 51 63 50 64 34 37 75 57
 DISE  65 72 90 88 74 81 74 52 44 65 60 52 46 39 45 62 40 49 41 49 62 21 49 55 42 21 58 35 74 27 60 42 59 60 54 45 58 39 43 72 54
 STUT  62 70 82 88 75 83 70 53 50 66 64 54 53 49 44 70 49 53 43 47 61 31 52 62 50 29 70 46 76 33 61 46 61 57 55 51 59 38 38 73 57
```

MATHEMATICS - LEVEL 7

INSTRUMENT AND POPULATION DESCRIPTION

This is a forty-item multiple choice test measuring selected circled objectives in the curriculum strands of Numbers/Numeration (5 items), Computation (6 items), Fractions (7 items), Decimals/ Percents (9 items), Measurement (3 items), Geometry (5 items), and Estimating/Graphs (5 items).

The population includes all students enrolled in grade 6 who took an on-level test and for whom valid answer sheets were turned in.

SYSTEM STRENGTHS AND WEAKNESSES

Overall, students performed poorly on this test with a system-wide average score of 54%. Generally, students appear to be mastering the objectives in the subtests of Numbers/Numeration and Computation and most of the objectives tapped in Estimating/Graphs. However, within these subtests there are isolated objectives on which students are doing poorly. These objectives involve identifying the missing information needed to solve word problems, estimating answers to word problems by rounding off, and getting distance information from a scale drawing.

In the strands of Fractions, Decimals/Percents, Measurement, and Geometry there appear to be severe deficits. In Fractions out of seven items, there are six in which students performed very poorly. The objectives covered by these items include subtracting, multiplying, and dividing common fractions or mixed or whole numbers, solving ratio and proportion problems, and solving one and two-step word problems involving fractions. In Decimals/Percents performance on all nine items was poor. The objectives measured were writing fractions as decimals and its inverse, finding a fractional part of a whole number, identifying decimal place value, and adding and subtracting decimals and mixed decimals and whole numbers. In Measurement most students are unable to calculate elapsed time given two points in time and do not know approximate Celsius temperature reading. In Geometry performance on all five items was poor. The objectives measured were identifying the perimeter and area of figures, and identifying geometric terminology.

BOSTON PUBLIC SCHOOLS

DEPARTMENT OF EDUCATIONAL TESTING

CURRICULUM REFERENCED FINAL MATHEMATICS - LEVEL 7

1985 - 1986

A.1	Writing numerals to the hundred trillions place	1
A.3	Identifying place value to the trillions place	2
A.5	Arranging any integers in order	3
A.8	Identifying nos. divisible by 2, 3, 4, etc. & odd and even	4
B.10	Solving probs. with 2 or 3 exponents up to the 5th power	5
A.11	Expressing exponents in words and vice-versa	6
B.1	Adding nos. with up to 7 digits; vert or horiz	7
B.2	Subtracting nos. with up to 8 digits; vert. or horiz.	8
B.3	Multiplying 5-digit by 3-digit nos.; vert. or horiz.	9
D.10	Writing fractions and mixed fractions as decimals	10
D.14	Changing common fractions to percents	11
B.16	Identifying the missing info. needed to solve word prob.	12
C.14	Solving one and two-step word probs. with fractions	13
C.6	Finding a fractional part of a large number	14
E.9	Knowledge of boiling & freezing points of water & body temp	15
C.8	Subtracting mixed nos. with unlike denoms.; regrouping	16
C.9	Multiplying 2 or 3 common fractions or mixed or whole nos.	17
C.10	Dividing common fractions or mixed or whole nos.	18
C.12	Solving ratio and proportion problems	19
D.1	Writing mixed decimals to the millionth place as nos.	20
D.2	Identifying decimal place value to the millionths place	21
D.6	Add and subtract decis. & mixed decis. & whole numbers	22
F.8	Identifying polygons with up to twelve sides	23
D.8	Dividing decis., mixed decis. and whole nos. w/2-dig. divis	24
D.12	Changing decimals to the thousandths place and mixed to %	25
D.9	Dividing by 10, 100 or 1000 by moving the decimal point	26
D.11	Changing any common fraction to a decimal	27
D.16	Finding the % of a whole no. or mixed decimal	28
E.1	Calculating elapsed time given two points in time	29
E.4	Interpreting and writing dates in numerical form	30
E.10	Knowing an approximate Celsius temperature reading	31
F.3	Identifying a ray, vertex, angle & bisector of an angle	32
F.13	Finding the perimeter of any figure given a word problem	33
F.15	Finding the area of any triangle, parallelogram or trapez.	34
F.16	Identifying center, diameter, radius, chord, arc, etc.	35
G.2	Rounding off decimals or mixed decimals to any place	36
G.3	Estimating answers to word probs. by rounding off	37
G.4	Identifying probablility in word problems	38
G.6	Using picture, bar, line, & circle graphs with multiples	39
G.10	Getting distance info. from a map or scale drawing	40

```
 972 MATH LEVL 7          TECK5005                 11/07/86
PERCENTAGE OF CORRECT ANSWERS PER ITEM
NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY **

SCHL     1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 TOTAL

 2130   83 42 62 92 53 85 83 86 77 51 46 44 41 38 44 47 51 52 79 44 31 59 90 11 36 31 44 25 36 81 18 40 34 29 55 57 33 77 66 16 52
 2170   85 58 65 93 57 92 91 88 80 49 46 55 39 51 38 29 46 57 91 55 39 61 89 11 36 51 52 27 38 90 25 23 29 44 50 58 34 77 80 24 55
 4570   90 57 38 85 38 95 95 85 95 14 38 57 14 42 23 33 19 42 76 61 19 42 90  9 57 33 23 19 38 90  9 28  9 42 57 57 28 80 66 14 48
 2060   83 54 51 89 37 91 83 83 75 45 24 37 21 40  5 18 37 45 81 37 21 56 89 10 18 29 24 18 40 86 13 24 32 29 16 54 37 62 83  8 45
 2370   85 47 60 91 57 90 91 81 78 56 42 51 50 48 34 46 51 67 85 47 36 57 78 15 43 27 48 27 31 76 24 25 27 27 44 58 24 51 54 14 51
 2240   82 58 41 85 37 90 83 80 69 35 35 46 38 45 16 25 32 43 80 33 27 45 79  3  6 33 37 19 32 83  6 17 33 20 27 48 20 67 54 16 43
 DISA   84 51 58 90 51 90 88 84 78 48 41 49 40 46 33 37 45 56 84 46 33 56 85 11 34 35 44 25 35 83 19 27 30 32 45 56 29 68 66 17 51

 2110   85 65 72 95 57 93 89 89 70 57 34 42 59 38 34 55 40 51 72 46 23 63 89 12 29 38 51 23 27 89 29 31 31 36 51 68 48 61 65 17 53
 2120   60 53 45 83 50 83 67 68 53 40 41 56 27 40 38 43 57 56 70 37 28 36 61 17 30 35 50 53 43 62 30 27 36 41 48 63 40 60 65 47 48
 2140   80 57 74 90 68 95 86 86 79 63 51 62 49 50 35 39 55 52 79 51 37 66 85 21 38 48 48 37 52 73 24 42 35 39 52 68 49 71 70 35 57
 2200   87 39 65 89 39 93 81 87 75 43 43 62 45 32 21 34 43 68 85 51 15 57 87  7 34 31 53 15 29 89 14 39 37 23 21 59 29 76 54  7 49
 2950   87 69 91 94 84 92 95 91 74 75 50 50 65 59 58 74 76 77 88 68 70 91 93 21 58 35 86 27 38 87 59 58 51 52 68 75 50 88 75 24 68
 DISB   80 58 71 90 63 92 84 84 71 58 46 55 49 47 40 50 58 62 80 52 39 65 83 17 40 38 59 33 40 79 34 42 39 40 51 68 44 73 67 28 57

 2330   88 62 64 93 54 96 88 84 73 61 37 48 47 47 34 39 52 62 84 56 45 65 87 18 37 51 40 22 40 85 17 32 39 32 55 73 26 77 66 16 55
 2080   86 54 50 94 23 91 96 86 79 40 38 40 49 35 15 42 45 52 83 47 28 59 89 16 20 25 35 25 47 86 25 22 27 20 13 62 35 79 67 16 49
 2180   85 58 60 90 49 91 88 82 76 60 48 61 47 59 45 60 54 66 86 58 50 70 84 35 58 49 65 44 56 87 40 49 46 44 54 68 48 76 76 40 62
 2090   83 64 55 94 48 94 91 88 73 57 46 55 47 48 46 42 40 57 86 55 42 70 91 14 39 38 40 25 39 89 19 53 36 29 44 76 23 73 57 13 54
 2190   83 70 69 94 67 97 86 87 77 50 38 68 52 48 39 39 46 50 86 54 44 63 94  9 48 43 53 33 52 88 12 33 51 38 36 64 46 75 79 17 57
 2260   90 38 53 92 36 92 90 83 77 43 27 43 36 33 17 23 25 30 92 33 28 58 82  7  7 26 41 20 40 86 11 20 26 11 23 61 28 71 67 10 44
 DISC   85 59 60 93 49 94 89 85 75 54 39 53 47 47 34 41 45 55 86 52 42 65 88 18 37 42 46 28 45 86 21 36 39 31 42 68 34 75 69 19 54

 2310   93 65 86 94 58 97 93 95 83 66 48 54 65 62 50 53 62 69 86 70 53 30 89 22 50 39 70 41 50 90 21 40 51 51 64 80 60 76 78 33 65
 2040   83 46 29 85 30 86 85 88 71 41 42 38 46 29 36 22 13 47 78 56 38 53 89 14 40 32 42 22 34 82 25 33 33 21 46 52 31 66 63 15 47
 2050   93 69 81 93 65 97 93 92 82 46 36 47 51 46 50 54 54 67 90 51 50 65 96 10 55 31 69 21 52 88 16 28 38 39 39 71 43 73 62 16 58
 DISD   90 62 69 91 53 94 91 92 79 51 42 47 54 47 46 45 46 62 86 59 48 67 92 15 49 34 62 28 46 87 20 33 41 38 49 69 45 72 67 22 57

 1240   82 55 65 95 40 93 87 83 71 41 28 49 31 47 27 25 29 41 82 39 21 45 90 13 30 33 38 27 43 92 17 18 22 20 22 60 29 64 64 13 47
 2100   77 47 50 87 29 86 80 80 67 51 32 54 41 32 22 25 32 41 77 62 40 57 85  8 34 35 59 28 35 80 14 22 31 25 19 65 36 56 64 10 47
 2270   85 63 51 91 58 90 93 82 79 52 43 60 43 57 47 42 42 53 82 54 49 59 88 26 36 39 50 25 46 82 11 33 30 40 46 63 42 72 64 31 55
 2980   81 53 66 95 24 95 95 83 73 51 38 53 45 46 21 42 50 53 87 54 33 61 89  4 32 30 39 24 34 84 16 30 42 28 15 56 37 73 69  8 50
 4610   ** ** ** ** ** ** ** **  0 ** ** ** ** ** ** ** ** **  0 ** ** ** **  0  0  0 ** ** ** **  0 **  0 **  0  0  0 ** **  0 72
 DISE   82 56 58 92 39 91 89 82 73 48 35 54 39 46 30 33 37 47 82 51 35 55 88 13 33 34 46 26 40 85 15 25 30 28 26 61 35 66 65 16 50

 DISA   84 51 58 90 51 90 88 84 78 48 41 49 40 46 33 37 45 56 84 46 33 56 85 11 34 35 44 25 35 83 19 27 30 32 45 56 29 68 66 17 51
 DISB   80 58 71 90 63 92 84 84 71 58 46 55 49 47 40 50 58 62 80 52 39 65 83 17 40 38 59 33 40 79 34 42 39 40 51 68 44 73 67 28 57
 DISC   85 59 60 93 49 94 89 85 75 54 39 53 47 47 34 41 45 55 86 52 42 65 88 18 37 42 46 28 45 86 21 36 39 31 42 68 34 75 69 19 54
 DISD   90 62 69 91 53 94 91 92 79 51 42 47 54 47 46 45 46 62 86 59 48 67 92 15 49 34 62 28 46 87 20 33 41 38 49 69 45 72 67 22 57
 DISE   82 56 58 92 39 91 89 82 73 48 35 54 39 46 30 33 37 47 82 51 35 55 88 13 33 34 46 26 40 85 15 25 30 28 26 61 35 66 65 16 50
 STOT   84 57 63 91 51 92 88 85 75 52 41 52 46 46 36 41 46 56 83 52 39 62 87 15 38 37 51 28 41 84 22 33 36 33 42 64 37 71 67 20 54
```

MATHEMATICS - LEVEL 8

INSTRUMENT AND POPULATION DESCRIPTION

This is a fifty-nine item multiple choice test developed by the State Department of Education and mandated for grade 8 students. Since it broadly correlates with the curriculum objectives and in the interest of limiting testing, the instrument serves as both the final exam for grade 8 students and the State Basic Skills Test.

The population includes all grade 8 students who were eligible to take the State Basic Skills Test in Mathematics.

SYSTEM STRENGTHS AND WEAKNESSES

Overall, students performed poorly on this test with a system-wide average score of 58%. Since the test was developed outside the system, the test is not divided into domains as is the case with locally developed tests; however, for analysis individual items were categorized according to the domains in the curriculum guide. Generally, students appear to have mastered the items that could be described as being in the strands of Numbers/Numeration and Fractions and most of the items tapped in the other strands of Computation, Decimals/Percents, Geometry, Measurement, and Estimating/Graphs. However, within these subtests, there are isolated objectives which are not being mastered by more than fifty percent of the students. Within Computation students are having difficulty with simple formulas. Within the Decimals/Percents students are not mastering using ratio and proportion, using simple interest and discount, and changing a fraction to a decimal. In Geometry the difficulty lies with finding the perimeter and area of various figures (i.e., triangle, square, and rectangle). In Measurement students are unable in large percentages to compute using numbers involving time and temperature. In Estimating/Graphs the difficulty lies with estimating the length, weight/mass, capacity, area, and volume.

These data suggest that although students have obtained mastery of basic skills in many areas, there are selected deficits in each of the domains.

BOSTON PUBLIC SCHOOLS

DEPARTMENT OF EDUCATIONAL TESTING

BASIC SKILLS TEST - FORM 7

MATHEMATICS - LEVEL 8

1985 - 1986

1	Recognize no. symbols, whole nos., frac., decimals, & powers of 10
2	
3	
4	Choose an appropriate unit of measurement in US customary system
5	Choose an appropriate unit of measurement in the metric system
6	Choose an appropriate measurement instrument involving cust. & metric
7	Use a map to compute highway distances
8	Convert common measurements within the same system
9	Compute by using time
10	Relate total cost and cost per unit
11	
12	Compute by using temperature
13	Round off numbers to a specified place
14	Approximate the answer to a computation problem
15	
16	
17	Read a scale drawing
18	Estimate length, wgt./mass., capacity, time, temp., area & volume
19	
20	
21	Estimate money
22	Find the volume of a cube or other rectangular solid
23	Find the perimeter of a triangle, square, and rectangle
24	Find the area of a triangle, square, and rectangle
25	Identify right angles & parallel, perpendicular, & intersecting lines like those in a street map
26	
27	Identify odd and even numbers
28	
29	
30	Recognize the shape of a cube, cylinder, or sphere
31	Identify the radius, diameter & center of a circle
32	Recognize the shape of a square, rectangle, triangle or parallelogram
33	Add, subtract, multiply, and divide whole numbers
34	
35	
36	
37	
38	Interpret a line graph
39	Add, subtract, multiply, and divide whole numbers
40	Add and subtract mixed numbers
41	Multiply whole numbers or money by fractions
42	Read a table
43	
44	Find & use averages (mean & median) for a group of numbers
45	Understand probabilities like weather forecasting or lotteries
46	Use ratio and proportion
47	
48	Use simple formulas
49	
50	Find a percent of a no. in a situation, i.e.; simple interest, discount
51	Find a percent of a no. in situation, i.e.; simple int., discounts
52	Use ratio and proportion
53	Find a percent of a no. in a situation, i.e.; simple int., discounts
54	Change a fraction to a decimal
55	Interpret a bar graph
56	Add, subtract, multiply and divide decimal nos. like money
57	
58	
59	Interpret a circle graph

```
 982 MATH LEVL 8          TECR5305                 11/07/86
PERCENTAGE OF CORRECT ANSWERS PER ITEM
NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY **

SCHL     1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40

 2130   98 73 65 81 67 89 43 48 32 97 80 29 48 56 80 39 63 50 43 53 55 48 34 39 60 83 70 79 79 75 94 82 89 72 85 94 64 48 92 60
 2170   98 90 77 89 81 94 46 46 33 95 82 31 59 52 79 44 64 42 37 51 62 45 37 40 57 87 71 79 73 81 93 91 90 85 81 88 66 59 89 54
 4570   ** 65 56 82 86 ** 52 26 17 ** 82 26 17 30 78 34 43 34 21 30 47 60 43 43 39 78 39 82 65 65 82 82 95 91 82 86 69 34 86 52
 2060   94 75 75 91 54 89 43 35 13 97 78 32 43 56 89 43 51 40 13 37 48 56 35 43 59 89 43 75 56 89 91 97 94 75 86 91 56 40 94 43
 2070   99 69 64 89 64 93 45 41 32 96 81 33 44 46 66 44 53 44 29 43 46 43 39 30 39 80 54 76 66 72 90 86 83 65 75 83 62 33 85 47
 2240   ** 87 77 92 78 94 54 59 22 98 85 36 49 61 96 56 78 47 29 49 59 50 45 42 61 96 61 82 75 84 91 96 92 89 92 ** 73 50 98 63
 DISA   98 77 69 87 70 92 47 45 30 96 81 31 48 51 78 44 60 45 33 47 54 47 38 37 52 84 62 78 71 77 92 88 88 76 82 89 65 46 89 53

 2110   ** 77 65 97 75 93 56 54 34 ** 88 47 63 45 75 52 54 38 40 47 54 50 40 45 45 88 68 84 75 72 93 90 93 77 81 93 75 43 88 56
 2120   ** 91 70 88 77 95 39 45 21 96 61 29 49 56 68 37 51 36 32 49 42 35 30 22 57 69 57 69 62 72 89 90 89 71 78 93 49 54 91 34
 2140   96 81 79 93 87 94 51 62 48 94 83 50 62 69 84 60 68 55 54 51 69 54 50 49 68 89 74 87 83 84 93 91 90 79 81 90 73 54 88 60
 2200   98 78 64 90 67 95 44 42 21 98 78 30 29 47 79 43 59 50 28 43 53 35 32 22 50 89 76 76 67 82 95 88 89 71 71 90 59 46 89 42
 2950   ** 88 88 90 75 95 47 55 37 98 86 38 67 60 88 49 67 55 39 53 63 62 41 49 69 83 69 81 81 79 89 85 88 83 84 95 68 44 88 61
 DISB   99 84 76 91 77 95 47 52 33 97 80 39 55 58 80 49 62 49 39 49 58 49 39 38 61 83 69 79 75 79 92 88 89 77 80 92 64 49 89 51

 2330   99 88 86 90 78 92 45 47 52 93 78 42 61 61 83 47 63 47 27 49 57 57 30 49 38 91 69 78 78 79 94 88 92 81 82 91 68 43 91 62
 2380   97 38 63 83 76 88 38 42 31 90 76 25 33 42 75 37 46 30 25 40 50 31 33 22 40 76 65 81 65 72 85 86 85 77 68 85 63 35 78 53
 2180   97 71 61 87 67 90 44 41 32 92 80 24 40 54 76 43 54 43 31 51 55 36 37 27 34 79 71 72 76 68 89 82 87 73 78 87 62 37 82 36
 2090   ** 63 66 92 80 91 65 50 42 95 87 38 48 53 84 59 58 37 55 52 62 30 24 31 57 82 68 80 70 67 88 82 82 77 71 87 65 51 82 51
 2190   98 71 72 86 75 94 46 42 31 97 81 26 53 56 81 47 62 37 42 51 56 48 39 37 42 81 63 66 69 68 93 88 89 78 89 92 63 46 91 55
 2260   ** 67 73 90 71 96 39 28 20 94 90 24 37 41 94 33 45 26 28 32 50 24 33 13 43 64 58 83 77 60 98 88 96 84 73 90 60 54 88 41
 DISC   98 70 72 88 74 92 47 43 38 93 81 31 48 54 81 46 57 39 35 48 56 41 33 33 41 81 67 76 73 70 91 86 88 78 79 89 64 43 86 50

 2310   ** 94 82 94 80 90 49 72 55 99 94 39 71 77 88 65 71 44 50 60 77 66 35 64 61 88 75 88 85 67 91 94 97 91 94 97 82 53 92 79
 2340   98 75 74 87 64 94 53 54 34 96 83 31 55 54 86 55 55 40 34 54 62 30 37 27 45 83 65 83 71 63 86 86 92 83 86 95 62 44 85 43
 2350   ** 90 82 98 93 96 66 60 56 98 87 54 72 67 91 63 82 57 65 67 80 68 67 53 63 89 81 94 89 77 97 89 92 87 87 94 79 65 92 77
 DISD   99 87 80 94 81 93 57 63 50 97 88 43 67 67 89 62 71 48 52 61 74 57 48 50 58 87 75 84 83 70 92 90 94 88 89 95 76 56 90 69

 1310   99 99 89 98 92 97 65 74 68 99 95 87 76 78 93 67 86 66 56 80 84 83 62 72 78 96 95 97 96 89 97 96 93 87 82 95 83 79 91 81
 1020   ** 98 83 98 91 98 62 64 59 ** 96 82 64 78 91 66 82 52 39 70 80 66 44 51 60 93 89 97 94 86 96 97 94 91 85 97 83 75 94 65
 1240   ** 72 59 86 66 91 44 45 31 94 90 25 35 46 83 43 58 46 31 50 59 57 35 41 41 74 76 80 73 69 93 84 86 75 73 93 67 45 89 46
 2100   95 61 69 87 67 91 50 38 26 88 76 37 45 46 74 45 51 42 19 38 53 22 30 15 56 68 67 74 67 61 89 76 85 77 76 89 64 43 83 48
 2270   95 38 45 82 56 87 34 41 27 94 76 24 52 35 73 31 47 46 26 36 49 27 31 20 38 69 67 69 65 67 89 86 84 75 67 84 61 41 82 45
 2980   ** 78 94 95 77 94 48 52 38 ** 80 34 57 54 89 47 55 50 31 45 57 52 21 37 58 87 77 87 78 80 97 94 91 85 90 95 77 42 96 54
 DISE   99 86 79 94 82 95 57 60 52 97 90 65 62 66 88 57 72 55 41 64 72 63 45 50 63 87 85 90 86 81 95 92 91 85 81 94 77 64 90 65

 DISA   98 77 69 87 70 92 47 45 30 96 81 31 48 51 78 44 60 45 33 47 54 47 38 37 52 84 62 78 71 77 92 88 88 76 82 89 65 46 89 53
 DISB   99 84 76 91 77 95 47 52 33 97 80 39 55 58 80 49 62 49 39 49 58 49 39 38 61 83 69 79 75 79 92 88 89 77 80 92 64 49 89 51
 DISC   98 70 72 88 74 92 47 43 38 93 81 31 48 54 81 46 57 39 35 48 56 41 33 33 41 81 67 76 73 70 91 86 88 78 79 89 64 43 86 50
 DISD   99 87 80 94 81 93 57 63 50 97 88 43 67 67 89 62 71 48 52 61 74 57 48 50 58 87 75 89 83 70 92 90 94 88 89 95 76 56 90 69
 DISE   99 86 79 94 82 95 57 60 52 97 90 65 62 66 88 57 72 55 41 64 72 63 45 50 63 87 85 90 86 81 95 92 91 85 81 94 77 64 90 65
 STOT   99 81 75 91 77 94 51 53 41 96 85 44 56 59 83 51 65 48 39 55 63 52 41 42 55 85 73 83 78 76 93 89 90 81 81 92 70 53 89 58
 982 MATH LEVL 8         TECR5005              11/07/86
PERCENTAGE OF CORRECT ANSWERS PER ITEM
NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY **

SCHL    41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 TOTAL

 2130   60 75 62 61 53 53 30 42 65 54 55 53 47 48 71 70 81 66 68 64
 2170   53 80 85 72 51 55 28 41 64 55 61 53 53 57 80 84 87 76 79 67
 4570   47 60 65 47 34 47 30 30 56 60 47 43 30 39 52 69 78 69 69 57
 2060   48 81 86 64 48 51 21 35 67 43 59 45 48 32 70 72 78 48 86 61
 2070   51 65 69 48 39 39 19 34 56 46 56 45 45 39 63 61 68 54 61 57
 2240   63 85 91 64 50 56 17 50 77 49 54 61 43 56 78 82 89 64 80 69
 DISA   54 74 79 60 47 49 24 39 63 51 56 51 47 47 71 72 79 64 71 63

 2110   50 75 77 56 38 45 31 47 65 50 56 61 50 43 61 72 75 54 63 64
 2120   52 76 72 68 43 53 17 35 70 54 58 50 33 46 66 68 78 63 60 59
 2140   71 77 82 69 58 64 34 45 78 60 66 61 66 52 81 82 82 66 68 71
 2200   53 78 77 45 57 67 22 20 57 43 51 64 44 32 75 83 85 64 76 61
 2950   55 83 90 77 60 59 20 35 80 55 67 57 51 43 79 82 86 65 83 69
 DISB   57 79 81 66 53 59 24 36 72 53 61 59 50 44 74 79 82 64 72 66

 2030   50 80 81 62 54 59 11 21 64 56 56 47 51 48 72 70 79 58 69 65
 2080   51 66 80 62 47 53 23 32 45 38 25 25 20 27 50 57 56 32 56 54
 2180   54 69 70 56 48 55 31 34 53 45 35 42 22 31 48 59 60 52 52 57
 2090   55 81 82 65 37 47 25 29 54 42 43 47 39 37 75 75 76 62 70 62
 2190   49 72 81 66 50 62 24 29 63 55 53 52 44 47 69 70 84 67 70 63
 2260   56 83 83 50 41 50  9 20 50 56 52 50 50 41 77 71 83 62 67 59
 DISC   52 75 79 61 48 55 22 28 57 49 45 44 38 39 65 67 73 56 64 61

 2010   85 83 83 80 60 64 51 52 88 77 80 77 74 69 80 89 87 83 76 76
 2040   58 76 78 59 45 67 25 28 50 57 65 55 56 44 73 68 80 53 76 63
 2050   76 84 88 79 70 82 49 56 82 62 63 68 58 75 86 88 87 81 80 78
 DISD   75 81 84 74 60 72 43 47 76 66 69 68 63 65 81 83 85 74 78 73

 1010   81 93 93 85 80 84 64 87 88 75 63 76 60 61 88 81 74 61 80 83
 1020   72 91 94 90 77 81 54 70 89 62 53 77 53 58 91 85 83 66 86 79
 1240   45 76 82 58 45 50 20 39 64 45 51 46 44 43 76 79 77 62 66 61
 2100   57 63 76 56 46 53 18 31 53 46 52 49 45 36 72 61 71 54 59 57
 2270   50 72 84 50 35 47 23 12 43 26 39 45 34 41 63 63 67 56 58 54
 2980   61 80 87 76 45 62 24 41 74 56 63 47 56 54 84 82 87 76 78 68
 DISE   68 85 89 77 66 72 45 62 78 60 56 65 52 53 84 78 77 63 76 73

 DISA   54 74 79 60 47 49 24 39 63 51 56 51 47 47 71 72 79 64 71 63
 DISB   57 79 81 66 53 59 24 36 72 53 61 59 50 44 74 79 82 64 72 66
 DISC   52 75 79 61 48 55 22 28 57 49 45 44 38 39 65 67 73 56 64 61
 DISD   75 81 84 74 60 72 43 47 76 66 69 68 63 65 81 83 85 74 78 73
 DISE   68 85 89 77 66 72 45 62 78 60 56 65 52 53 84 78 77 63 76 73
 STOT   61 79 83 68 56 62 33 44 69 56 56 57 49 49 75 75 78 63 72 67
```

HIGH SCHOOL MATHEMATICS

GENERAL MATHEMATICS

INSTRUMENT AND POPULATION DESCRIPTION

This is a forty-item multiple choice test measuring the circled objectives in the curriculum strands of Numbers/Numeration (3 items), Computation (8 items), Fractions (6 items), Decimals/Percents (6 items), Measurement (5 items), Geometry (10 items), Estimating/Graphs (2 items).

The population includes all high school students (with the exception of the exam schools) who took the General Mathematics course and for whom valid answer sheets were submitted.

SYSTEM STRENGTHS AND WEAKNESSES

Overall, students performed poorly on this test with a system-wide average score of 50%. Generally, students appear to be mastering the objectives in the Estimating/Graphs domain and most of the items in the Numbers/Numeration domain. However, in the Computation domain, out of eight items there were four items which fewer than 50% of the students answered correctly. The objectives measured by these items were: finding the average of whole numbers and decimals; knowing the order of operations; writing number sentences for word sentences; and solving a simple equation with one variable and one operation. In Fractions the difficulty lies with multiplying fractions and solving one and two-step problems involving fractions. Within the Measurement domain students are having difficulty with performing two-step conversions between units of time, and performing two-step conversions within English and metric measures.

The most severe deficits as strands lie in the domains of Decimals/Percents and Geometry. All six items measuring objectives in Decimals/Percents were answered correctly by fewer than fifty percent of the students. The objectives covered were changing fractions to decimals and decimals to fractions, finding the percent of a given number, and solving one and two-step word problems involving decimals and percents. Of the ten Geometry items there were seven that were answered correctly by fewer than fifty percent of the students. The objectives tapped were identifying various types of triangles, parts of geometric figures, types of geometric solids, the area of a given figure, and the circumference of a circle.

BOSTON PUBLIC SCHOOLS

DEPARTMENT OF EDUCATIONAL TESTING

CURRICULUM REFERENCED FINAL

GENERAL MATHEMATICS

1985 - 1986

B.2	Subtract numbers with up to seven digits	1	
B.4	Divide five-digit by three-digit nos. with remainders	2	
B.7	Find the average of whole nos. and decimals; word problems	3	
B.17	Solving one-, two-, or three-step word problems	4	
C.3	Arranging fractions in order of size	5	
C.7	Add 2 or 3 mixed nos. with unlike denominators; regrouping	6	
E.2	Doing two-step conversions between units of time	7	
E.12	Identify the appropriate unit of measurement; Engl. or metr	8	
F.13	Find the perimeter of any figure, given a word problem	9	
A.10	Express a no. up to 100 as a product of prime factors	10	
A.4	Identify a 10-digit no. from its expanded exponential not.	11	
A.13	Finding the square roots of perfect squares	12	
B.9	Knowing the order of operations	13	
B.12	Writing open no. sentences for word sentences	14	
B.13	Solving a simple equation with one variable & one operation	15	
B.16	Identifying missing info needed to solve a word problem	16	
C.9	Multiply 2 or 3 common frac., mixed nos, find frac. of money	17	
C.10	Divide common fractions, mixed nos. or whole nos.	18	
C.12	Solve ratio and proportion problems	19	
D.11	Change any common fraction to a decimal	20	
C.14	Solve 1- and 2-step word problems involving fractions	21	
D.12	Change decimals to the 1,000 place and mixed dec. to %	22	
D.14	Change common fractions to percents; w/terminating decimals	23	
D.16	Finding the percent of a whole no. or mixed decimal	24	
D.17	Finding what percent one number is of another; word problem	25	
D.19	Solving 1- & 2-step word probs. involving decimals & perc.	26	
E.6	Doing 2-step conversions within English & metric measures	27	
E.8	Doing 2-step conversions within English & metric weight	28	
E.9	Knowledge of degrees in Farenheit to do simple word problem	29	
G.3	Estimating answers to word problems by rounding off	30	
F.6	Find a missing angle in a triangle and quadrilateral	31	
F.8	Identifying polygons with up to twelve sides	32	
F.12	Identifying an isosceles, scalene and equilateral triangle	33	
F.15	Find the area of a triangle, parallelogram or trapezoid	34	
F.16	Identify center, diameter, radius, chord, arc,etc; circle	35	
F.17	Finding the circumference of a circle	36	
F.18	Finding the area of a circle	37	
F.19	Identifying seven geometric solids	38	
F.21	Find the volume of a rectangular solid or cube; word prob.	39	
G.4	Identifying probability in word problems	40	

```
 417 GENERAL MATH        TECR5005              11/07/86
PERCENTAGE OF CORRECT ANSWERS PER ITEM
NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY **

SCHL    1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 TOTAL

 1040  90 75 46 59 56 34 28 96 84 53 65 53 37  6 37 78 25 34 62 15 21 46 46 37 21 37 40 12 46 59 28 43 25 46 25 37 15 46 53 62 44
 1110  88 72 47 76 46 52 39 89 71 55 66 50 40 21 42 85 30 47 44 15 43 59 44 40 44 30 55 27 57 63 40 60 24 52 44 42  8 40 52 59 49
 DISA  89 73 47 71 49 46 35 92 75 54 66 51 39 16 40 83 28 43 50 15 36 55 45 39 37 32 50 22 54 62 36 55 24 50 38 40 10 42 52 60 48

 1250  96 54 52 74 34 50 15 90 82 35 49 34 17 21 32 90 27 51 48  5 48 34 35 43 45 36 44 16 61 67 18 35 18 37 14 27 22  8 36 63 42
 1100  90 79 45 81 57 78 28 96 93 70 76 46 26 15 40 89 53 81 48 25 45 54 59 46 43 31 42 14 76 71 53 68 31 35 20 32 21 32 50 75 53
 DISB  93 65 49 77 44 62 20 93 87 50 61 39 21 18 36 89 38 64 48 14 46 42 45 44 44 34 43 15 67 69 33 49 24 36 16 29 22 18 42 68 46

 1360  91 82 44 83 57 57 33 91 83 67 71 48 58 33 42 94 33 58 58 30 58 32 50 46 48 50 46 35 71 69 42 60 39 44 42 57 39 37 50 78 55
 1120  93 90 51 78 71 61 40 88 86 61 70 45 36 11 43 91 41 63 41 18 43 41 50 46 58 38 56 21 60 76 33 48 31 50 28 30 28 35 66 73 52
 1160  90 70 35 77 49 55 43 91 73 54 62 49 48 19 40 91 29 44 57 19 44 47 41 39 41 28 47 24 63 72 47 50 42 36 27 48 24 27 42 66 49
 DISC  91 79 42 79 58 57 39 90 80 60 66 47 47 21 41 92 34 54 53 22 48 41 46 43 48 37 49 26 64 72 41 52 38 42 32 45 29 32 51 71 51

 1350  86 81 60 81 68 68 42 84 81 63 57 65 28 15 55 84 36 52 57 23 44 63 44 57 50 55 52 18 60 73 36 47 31 39 21 42 26 26 65 60 52
 1070  89 87 46 84 50 57 28 95 93 67 51 32 32 57 65 93 31 62 48 18 43 70 60 42 40 46 53 14 82 78 40 48 31 39 23 43 26 51 57 78 54
 DISD  88 85 51 83 56 61 33 91 89 65 53 45 31 42 61 90 33 58 51 20 44 67 54 48 44 50 52 15 74 76 39 48 31 39 22 43 26 42 60 71 53

 1380  91 74 40 67 45 56 40 81 81 55 56 58 30 17 44 86 30 48 42 19 52 44 34 49 41 24 40 22 53 68 40 46 31 46 42 50 25 20 44 66 48
 1190  90 89 39 84 56 69 48 93 87 71 75 53 48 18 43 91 42 76 51 20 53 42 71 59 48 41 66 25 72 85 41 61 48 58 29 49 25 42 71 88 58
 1210  89 73 45 77 45 46 40 85 73 72 65 60 48 29 52 89 34 49 54 33 42 52 53 50 42 36 42 24 76 61 42 62 53 44 49 45 25 44 54 81 53
 1240  89 84 46 81 46 42 36 92 81 42 57 35 27 25 42 90 18 39 56 14 34 46 35 35 56 32 40 15 70 72 40 39 28 39 38 31 28 31 48 76 47
 DISE  90 79 42 75 48 55 41 87 81 59 62 53 36 21 45 88 31 53 49 20 47 45 46 49 46 32 47 21 64 72 41 51 38 47 39 45 25 33 53 75 51

 DISA  89 73 47 71 49 46 35 92 75 54 66 51 39 16 40 83 28 43 50 15 36 55 45 39 37 32 50 22 54 62 36 55 24 50 38 40 10 42 52 60 48
 DISB  93 65 49 77 44 62 20 93 87 50 61 39 21 18 36 89 38 64 48 14 46 42 45 44 44 34 43 15 67 69 33 49 24 36 16 29 22 18 42 68 46
 DISC  91 79 42 79 58 57 39 90 80 60 66 47 47 21 41 92 34 54 53 22 48 41 46 43 48 37 49 26 64 72 41 52 38 42 32 45 29 32 51 71 51
 DISD  88 85 51 83 56 61 33 91 89 65 53 45 31 42 61 90 33 58 51 20 44 67 54 48 44 50 52 15 74 76 39 48 31 39 22 43 26 42 60 71 53
 DISE  90 79 42 75 48 55 41 87 81 59 62 53 36 21 45 88 31 53 49 20 47 45 46 49 46 32 47 21 64 72 41 51 38 47 39 45 25 33 53 75 51
 STDT  90 77 44 77 50 56 36 89 82 58 62 49 36 22 44 89 33 54 50 19 46 47 47 46 45 35 48 21 65 71 39 51 34 44 33 42 24 33 52 72 50
```

BASIC MATHEMATICS I

INSTRUMENT AND POPULATION DESCRIPTION

This is a forty-item multiple choice test measuring selected circled objectives in the curriculum strands of Numbers/Numeration (7 items), Computation (4 items), Fractions (8 items), Decimals/Percents (7 items), Measurement (6 items), Geometry (5 items), and Estimating/Graphs (3 items).

The population includes all high school students (with the exception of the exam schools) who were enrolled in the Basic Mathematics course and for whom valid answer sheets were turned in.

SYSTEM STRENGTHS AND WEAKNESSES

Overall, students performed very poorly on this test with a system-wide average score of 44%. Generally, students appear to be mastering the objectives measured by the Computation items and most of the Estimating/Graphs items; in the latter domain students had difficulty rounding off mixed decimals to the nearest whole number.

However, for all other domains there are many items in which students are performing very poorly. In Numbers/Numeration students had difficulty identifying place value to the hundred millions place, arranging integers in order, and finding the square root of perfect squares. In the Fractions domain, out of eight items, there are six that fewer than 50% of the students answered correctly. The objectives measured by these items are adding, subtracting, multiplying, and dividing common fractions and whole numbers. In the Decimals/Percents domain, out of seven items, there are five that fewer than 50% of the students answered correctly. Students had difficulty with multiplying and dividing simple and mixed decimals and identifying decimal place value to the thousandths place. In both Measurement and Geometry, all items were answered incorrectly by more than 50% of the students. In Measurement many students are unable to calculate elapsed time given two points in time; to add and subtract English linear measurement and units of weight with regrouping; and identify the appropriate unit of measurement in English or metric. In the Geometry domain, many students are unable to find the perimeter or area for various geometric shapes; and identify terms dealing with lines given a map or isolated drawings.

BOSTON PUBLIC SCHOOLS

DEPARTMENT OF EDUCATIONAL TESTING

CURRICULUM REFERENCED FINAL

BASIC MATHEMATICS I

1985 - 1986

A.3	Identifying place value to the hundred millions place	1
A.4	Arranging integers in order (under ten)	2
A.6	Identifying numbers divisible by 2, 3, 4, 5, and 10	3
A.8	Identify the prime factors of nos. between one and fifty	4
A.11	Finding the square root of perfect squares	5
B.2	Add 3 nos. w/different nos. of digits, written vert. or horiz.	6
B.6	Divide 3-digit nos. by 2-digit nos. with remainders	7
B.9	Find the average of a set of 2-digit nos. (no remainders)	8
B.10	Multipy and divide in parenthesis before add or subtract	9
C.2	Shading in a fractional part of a whole unit	10
C.4	Identify fractions equal to one-half,one-third,one-fourth , etc.	11
C.3	Add & subtract common fractions w/unlike denominators	12
C.6	Add & subtract mixed nos. w/like denoms, no regrouping	13
C.7	Subtract a common fraction from a 1-digit whole number	14
C.8	Multiply common fractions w/cancellation "of" substitutes x sign	15
C.9	Multiply a common fraction & a whole no. "of" for x sign	16
A.7	Identify prime and composite nos. between one and fifty	17
C.11	Divide common fractions, answers in simplest terms	18
D.5	Add & subtract decimals & mixed decimals, w/unequal nos of place	19
D.6	Multiply simple deci. & mixed deci. w/1-digit multiplrs & multcd	20
D.7	Divide decis. & mixed decis. of 2-digits by 1-digit divisors	21
D.8	Writing mixed fractions w/10ths and 100ths as mixed decimals	22
D.2	Identifying decimal place value to the thousandths place	23
D.9	Applying the complementarity of percents to 100%	24
E.1	Calculate elapsed time given 2 pts. in time in digital or conven	25
E.3	Tell the no. of days in ea. month & order of the months	26
E.6	Add & subtract English linear measurements w/regrouping	27
D.1	Write mixed decis. to the 1000th place written in words as nos.	28
E.10	Add & subtract English units of weight with regrouping	29
E.12	Knowledge of degrees in Fahrenheit & boiling & freezing points	30
E.15	Identify the appropriate unit of measurement English or metric	31
F.1	Identify terms dealing w/lines given a map or isolated drawings	32
A.9	Expressing exponenets in words and vice-versa	33
G.2	Rounding off mixed decimals to the nearest whole number	34
F.9	Finding the perimeter of polygons	35
F.10	Find the area of a rectangle or square, given the formula	36
F.11	Find the area of a right triangle, given formula, answ. sq. unit	37
F.12	Identifying the diameter of a circle	38
G.3	Estimating answers to word problems by rounding off	39
G.5	Use picture, bar & line graphs to answer ques. & solve problems	40

```
 415 BASIC MATH I        TECR5005             11/07/86
PERCENTAGE OF CORRECT ANSWERS PER ITEM
NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY **

SCHL    1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 TOTAL

 1100  61 38 64 38 48 93 64 38 70 35 80 38 48 54 51 38 58 51 70 58  6 38 41 70 35 16  9 61 22  6 54 38 74 29 35 29 45 41 45 70 47
 DISB  61 38 64 38 48 93 64 38 70 35 80 38 48 54 51 38 58 51 70 58  6 38 41 70 35 16  9 61 22  6 54 38 74 29 35 29 45 41 45 70 47

 1363  ** 50 83 66 83 ** 66 66 66 33 83 33 ** ** 33 66 83 66 83 33  0 66 33 83 33 83 16 50 16 50 66 66 ** 50 33 66 66 50 83 ** 62
 DISC  ** 50 83 66 83 ** 66 66 66 33 83 33 ** ** 33 66 83 66 83 33  0 66 33 83 33 83 16 50 16 50 66 66 ** 50 33 66 66 50 83 ** 62

 1353  31 43 25 73 25 60 40 63 33 35 31 33 40 26 33 26 56 25 36 31 35 21 21 26 48 21 26 48 30 38 30 33 26 41 35 50 50 26 56 46 37
 1070  39 45 61 80 32 79 54 56 38 44 46 26 46 30 29 34 40 27 54 32 25 42 31 43 39 21 40 51 40 30 44 29 32 42 38 52 36 36 48 82 42
 DISD  36 44 46 77 29 71 48 59 36 40 40 29 43 29 31 31 47 26 47 32 29 33 27 36 43 21 35 50 36 33 38 31 30 41 37 51 41 32 52 68 40

 1190  72 44 62 34 58 ** 89 58 72 44 79 37 79 51 51 51 68 72 82 65  0 44 48 79 51 24 34 41 48 20 34 58 89 48 34 24 27 34 65 82 54
 1210  62 71 51 60 68 88 71 65 88 37 65 37 48 37 34 51 60 37 82 31  2 54 20 48 42 31  8 54 14 45 20 54 74 40 48  8 62 57 51 40 48
 DISE  67 59 56 48 64 93 79 62 81 40 71 37 62 43 42 51 64 53 82 46  1 50 32 62 46 28 20 48 29 34 26 56 81 43 42 15 46 46 57 59 51

 DISA
 DISB  61 38 64 38 48 93 64 38 70 35 80 38 48 54 51 38 58 51 70 58  6 38 41 70 35 16  9 61 22  6 54 38 74 29 35 29 45 41 45 70 47
 DISC  ** 50 83 66 83 ** 66 66 66 33 83 33 ** ** 33 66 83 66 83 33  0 66 33 83 33 83 16 50 16 50 66 66 ** 50 33 66 66 50 83 ** 62
 DISD  36 44 46 77 29 71 48 59 36 40 40 29 43 29 31 31 47 26 47 32 29 33 27 36 43 21 35 50 36 33 38 31 30 41 37 51 41 32 52 68 40
 DISE  67 59 56 48 64 93 79 62 81 40 71 37 62 43 42 51 64 53 82 46  1 50 32 62 46 28 20 48 29 34 26 56 81 43 42 15 46 46 57 59 51
 STOT  48 47 52 65 42 80 59 57 53 39 54 32 50 37 36 38 53 37 60 39 18 39 30 48 42 24 27 51 32 30 38 39 50 40 38 39 44 37 53 67 44
```

BASIC MATHEMATICS II

INSTRUMENT AND POPULATION DESCRIPTION

This is a forty-item multiple choice test measuring the circled objectives in the curriculum strands of Computation (7 items), Fractions (7 items), Decimals/Percents (10 items), Measrement (3 items), Geometry (8 items), and Estimating/Graphs (5 items).

The population includes all high school students (with the exception of the exam schools) who took the Basic Mathematics II course and for whom valid answer sheets were submitted.

SYSTEM STRENGTHS AND WEAKNESSES

Overall, students performed poorly on this test with a system-wide average score of 55%. Generally, students appear to be mastering the objectives measured by the Computation items and most of the Decimals/Percents items; in the latter domain students had difficulty changing the percents for simple common fractions to fractions and solving one- and two-step word problems involving decimals and percents.

However, for all other domains there are many items in which students are performing poorly. In Fractions students had difficulty subtracting mixed numbers with like denominators with regrouping, solving ratio and proportion problems in practical situations, and solving one- and two-step problems involving fractions. In the Measurement domain, fewer than 50% of the students answered each of the items correctly. The objectives measured by these items were calculating elapsed time given two points in time, renaming English and metric linear measurement, and knowledge of degrees in Fahrenheit and boiling and freezing points. Half of the items in Geometry were answered incorrectly by more than 50% of the students. The objectives tapped were finding the area of a triangle or parallelogram, identifying the parts of a circle, finding the circumference of a circle, and finding the volume of a rectangular solid or cube given the formula. In Estimating/Graphs students did poorly on the items that measured rounding decimals, estimating answers to word problems, and identifying probability in word problems.

BOSTON PUBLIC SCHOOLS

DEPARTMENT OF EDUCATIONAL TESTING

CURRICULUM REFERENCED FINAL BASIC MATHEMATICS II

1985 - 1986

B.1	Add numbers w/up to six digits, written vertically or horiz.	1	
B.4	Divide 4-digit nos. by 2-digit nos., with or without remainders	2	
E.1	Calculate elapsed time given 2 pts. in time; digital or convent.	3	
G.2	Rounding decis. & mixed decis. to nearest whole 10th, money/cent	4	
C.5	Add & subtract common fractions w/unlike denominators	5	
C.8	Subtract mixed nos. with like denominators, with regrouping	6	
D.2	Identify decimal place value to the ten-thousandths place	7	
D.7	Multiply decimals & whole nos. w/up to two-digit multipliers	8	
F.2	Identify right, acute, & obtuse angles, given drawings & list	9	
F.7	Identify where shapes appear in the real world	10	
G.3	Estimate answers to word probs. by rounding, incl. area & volume	11	
B.17	Solve 1- & 2-step word problems involving computation	12	
C.9	Add & subtract mixed nos. w/unlike denoms; no regrouping	13	
C.10	Multiply 2 or 3 common fracs., mixed nos., or whole nos.	14	
C.11	Divide common fractions, mixed numbers or whole numbers	15	
C.13	Solve ratio and proportion problems in practical situations	16	
C.15	Solve 1- & 2-step word problems involving fractions	17	
D.8	Divide decis. & whole nos. w/1-digit divisors, w/o remainders	18	
D.10	Changing common fractions to (terminating) decimals	19	
D.13	Change a whole-no. percent of 2 digits to its deci. equivalent	20	
D.14	Change common fractions to percents (only terminating decimals)	21	
F.11	Find the perimeter of a square,rectangle or triangle/word prob.	22	
F.13	Find area of triangle or parallelogram, give formula,ans.sq.unit	23	
B.9	Multiply and divide in parentheses before add or subtract	24	
B.13	Use letters as place holders in simple open number sentence	25	
B.14	Evaluate an expression w/1 variable, given value of variable	26	
B.16	Find the missing info needed to solve a word problem	27	
D.16	Tell what % of a figure is shaded, give answ. as common fraction	28	
D.15	Change the percents for simple common fractions to fractions	29	
D.17	Find the percent of a whole number(only whole number percents)	30	
D.18	Solve 1 & 2 step word probs. involving decimals & percents	31	
E.6	Rename "improper" English & metric linear meas. w/2 measures	32	
E.9	Knowledge of degrees in Fahrenheit & boiling & freezing points	33	
F.14	Identify center,diameter,chord,radius,&circumference of circle	34	
F.15	Find circumference of a circle, given formula & value of π	35	
F.16	Identify 7 geometric solids & everyday objects with these shapes	36	
F.18	Find volume of a rectangular solid or cube, given formula	37	
G.4	Identifying probability in word problems	38	
G.5	Use picture, bar, line & circle graphs to ans. ques. & problems	39	
G.6	Graph ordered pairs, and giving the coordinates of plotted pts.	40	

```
 416 BASIC MATH II      TECR5005              11/07/86
PERCENTAGE OF CORRECT ANSWERS PER ITEM
NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY **

SCHL     1   2   3   4   5   6   7   8   9  10  11  12  13  14  15  16  17  18  19  20  21  22  23  24  25  26  27  28  29  30  31  32  33  34  35  36  37  38  39  40 TOTAL

 1040   92  64  35  38  61  30  35  58  51  82  38  66  79  66  64  51  38  46  48  76  53  48  46  46  82  33  74  17  25  58  43  35  35  51  48  69  46  17  76  43  51
 1110   76  42  42  23  34  21  31  63  50  57  36  60  71  55  42  36  34  23  42  57  21  52  26  23  76  28  65  21  10  36  42  28  36  36  23  55  34   7  50  28  40
 DISA   84  53  38  31  48  25  33  61  50  70  37  63  75  61  53  44  36  35  45  67  27  50  36  35  79  31  70  19  18  48  42  32  36  44  36  62  40  12  63  36  46

 1250   82  39  32  27  45  17  35  64  43  71  52  67  72  54  54  43  27  57  42  76  23  63  28  53  78  32  69  27  30  46  41  47  31  30  32  67  30  26  60  32  46
 1100   90  52  37  17  45  35  35  67  47  82  35  75  72  72  70  35  27  50  50  67  50  60  45  65  92  32  72  25  25  60  57  37  20  25  40  75  42  22  75  42  50
 DISB   84  44  34  23  45  23  35  65  45  75  46  69  72  61  60  40  27  54  45  73  32  61  34  57  83  32  70  26  28  51  46  44  27  28  35  69  34  24  65  36  48

 1060   84  64  52  56  68  32  48  56  64  56  52  64  88  68  56  24  24  56  20  84  28  56  32  64  92  32  68  32  28  56  64  44  52  52  36  76  44  24  60  40  52
 1120   78  42  47  52  71  28  47  66  66  73  61  57  80  45  54  45  40  59  57  76  50  83  50  54  78  54  66  30  23  71  57  57  76  50  35  73  57  40  64  50  57
 1160   82  61  44  21  42  46  21  51  59  61  53  59  72  63  44  44  48  61  42  59  46  78  48  59  82  63  72  31  34  44  23  48  53  46  34  65  46  44  59  61  52
 DISC   81  55  47  40  58  36  36  57  63  64  56  59  78  57  50  40  40  59  42  71  43  75  45  58  83  53  69  31  28  57  44  50  61  49  35  71  50  38  61  52  54

 1050   87  57  50  42  67  42  53  71  50  69  45  73  69  67  49  53  43  54  73  79  61  65  31  87  84  47  80  35  49  57  57  47  47  45  26  68  52  23  73  50  57
 1070   83  62  64  56  70  45  58  75  61  89  50  84  85  72  75  65  43  69  70  88  66  74  40  80  88  39  81  37  57  69  52  64  38  51  39  76  52  31  77  55  63
 DISD   85  60  59  51  69  44  56  73  57  81  48  80  79  70  65  60  43  63  71  84  64  71  36  83  86  42  81  36  54  64  54  58  42  48  34  73  52  28  76  53  61

 1080   89  52  41  39  73  30  44  59  60  81  48  76  84  66  55  44  34  57  61  68  54  65  50  68  84  40  71  26  32  57  40  42  48  62  44  74  44  23  76  59  56
 1190   79  71  43  23  57  33  33  67  59  85  56  78  86  76  62  49  47  58  41  82  66  78  37  73  88  31  71  43  34  64  46  51  52  46  32  74  61  23  71  56  57
 1210   84  60  50  48  65  25  46  70  71  79  42  70  74  58  60  55  42  51  60  80  53  77  36  69  83  47  81  34  37  72  51  60  63  46  34  82  46  37  78  58  58
 1240   88  44  51  26  55  22  17  55  42  71  28  73  82  77  62  44  22  46  51  77  40  64  37  73  93  62  82  13  17  57  33  57  60  37  35  64  26  28  73  48  51
 DISE   86  56  44  38  67  29  41  63  61  80  46  75  82  66  58  48  37  55  57  74  55  70  43  69  85  42  74  30  33  62  43  49  53  53  39  75  46  27  76  57  56

 DISA   84  53  38  31  48  25  33  61  50  70  37  63  75  61  53  44  36  35  45  67  27  50  36  35  79  31  70  19  18  48  42  32  36  44  36  62  40  12  63  36  46
 DISB   84  44  34  23  45  23  35  65  45  75  46  69  72  61  60  40  27  54  45  73  32  61  34  57  83  32  70  26  28  51  46  44  27  28  35  69  34  24  65  36  48
 DISC   81  55  47  40  58  36  36  57  63  64  56  59  78  57  50  40  40  59  42  71  43  75  45  58  83  53  69  31  28  57  44  50  61  49  35  71  50  38  61  52  54
 DISD   85  60  59  51  69  44  56  73  57  81  48  80  79  70  65  60  43  63  71  84  64  71  36  83  86  42  81  36  54  64  54  58  42  48  34  73  52  28  76  53  61
 DISE   86  56  44  38  67  29  41  63  61  80  46  75  82  66  58  48  37  55  57  74  55  70  43  69  85  42  74  30  33  62  43  49  53  53  39  75  46  27  76  57  56
 STOT   85  55  46  38  62  31  42  64  58  77  47  72  79  65  58  48  37  55  56  75  51  68  41  67  84  42  74  30  34  59  45  49  48  48  37  73  45  27  72  52  55
```

GEOMETRY

INSTRUMENT AND POPULATION DESCRIPTION

This is a forty-item multiple choice test measuring the circled objectives in the curriculum strands of Early Structure: Lines/Planes/Angles (2 items), Triangles (3 items), Quadrilaterals/Regular Polygons (5 items), Similarity (9 items), Area (6 items), Pythagorean Theorem (7 items), Circles/Spheres (5 items), and Solids (3 items).

The population includes all high school students (with the exception of the exam schools) who took the Geometry course and for whom valid answer sheets were submitted.

SYSTEM STRENGTHS AND WEAKNESSES

Overall, students performed very poorly on this test with a system-wide average score of 45%. Generally, students appear to be mastering the domains of Early Structure: Lines/Planes/Angles, Triangles, and Quadrilaterals/Regular Polygons. However, in the remaining domains there appear to be serious deficits. In Similarity students are having difficulty with converting measurements on a triangle into proportions, determining whether or not two triangles are similar, finding measurements in pairs of similar triangles, finding the three geometric means in a right triangle, and calculating the areas of similar figures. Of the six items in the Area domain, there are five items which fewer than 50% of the students answered correctly. Of the seven items tapping the Pythagorean Theorum, there are six items which fewer than 50% of the students answered correctly. Performance in the Circles/Spheres and Solids domains is also poor. Students had difficulty performing calculations involving arcs, angles, area, circumference, surface areas, and volumes.

BOSTON PUBLIC SCHOOLS

DEPARTMENT OF EDUCATIONAL TESTING

CURRICULUM REFERENCED FINAL GEOMETRY

1985 - 1986

G.2	Finding missing measurements in quadrilaterals	1	
G.4	Proving assertions about quadrilaterals	2	
E.13	Calculating angles of triangles	3	
B.7	Calculate angle measurements using info on congruent angles	4	
B.8	Write short proofs with postulates & theorems of congr. angles	5	
E.10	Calculating values using the midline theorem	6	
C.6	Prove two given triangles congruent, using SAS, ASA, OR SSS	7	
G.6	Find measurements involving the diagonals of quadrilaterals	8	
G.8	Demonstrate visually basic info about angles of polygons	9	
G.9	Solve problems involving angles of regular polygons	10	
H.1	Express relationship between parallel lines & transversal	11	
H.2	Using the relationships to calculate measurements	12	
H.4	Converting measurements on a triangle into proportions	13	
H.5	Finding missing measurements on a triangle; using proportions	14	
H.7	Determining whether two given triangles are similar	15	
H.8	Finding missing measurements in pairs of similar triangles	16	
H.14	Calculate measurements on a triangle with angle bisectors	17	
H.15	Finding the 3 geometric means in a right triangle	18	
H.16	Calculating areas of similar figures	19	
I.1	Calculate areas of triangles & quads using basic & Heron's form	20	
		21	
I.2	Find missing dimensions of quadrilaterals given the area	22	
I.3	Find areas of triangles with common dimensions	23	
I.4	Finding areas of complex polygonal regions	24	
I.5	Finding areas of regular polygons	25	
J.1	Stating the Pythagorean theorem in terms of areas	26	
J.5	Determining whether a given triangle is a right triangle	27	
J.4	Finding the missing sides of right triangles	28	
J.6	Finding missing dimensions of the 30-60 right triangle and the	29	
J.6	the isosceles right triangle	30	
J.9	Finding an altitude of a given triangle	31	
J.13	Solving problems involving the Pythagorean theorem	32	
K.5	Perform calculations involving circles, chords, and tangents	33	
K.6	Perform calculations involving arcs	34	
K.9	Calculate measures of angles, both sides intersect a circle	35	
K.16	Perform calculations involving the area of a circle	36	
K.15	Perform calculations involving the circumference of a circle	37	
L.1	Calculate the surface area and volume of a given prism	38	
L.4	Calculate the surface area & volume of a given cylinder	39	
L.2	Calculate the surface area and volume of a given pyramid	40	

```
 425 GEOMETRY           TECR5005            11/07/86
PERCENTAGE OF CORRECT ANSWERS PER ITEM
NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY **

SCHL    1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 TOTAL

 1340  64 34 39 59 26 62 28 73 56 52 70 59 45 63 39 45 53 42 23 43 45 51 42 50 38 50 35 45 38 57 35 35 54 53 47 19 43 34 38 44 46
 1110  69 40 53 50 37 50 38 73 58 53 77 62 41 54 38 48 62 36 34 48 62 44 49 30 48 36 24 52 54 64 52 44 44 50 40 40 48 33 38 45 48
 DISA  66 36 46 55 28 57 33 73 57 52 73 60 43 59 39 46 57 39 28 45 53 47 45 41 42 43 30 48 46 60 42 39 49 52 44 28 45 33 38 44 47

 1250  70 13 40 56 16 45 47 83 60 35 64 71 48 78 29 51 74 48 25 29 39 48 24 22 34 42 25 25 41 45 27 36 42 45 33 19 37 44 20 45 41
 1100  37 18 10 22 22 45 31 77 29 33 72 35 16 54 25 16 31 43 27 37 35 37 25 14 50 39  8 43 47 43 25 29 39 25 20 12 37 33 35 54 33
 DISB  59 14 30 45 18 45 41 81 50 34 66 59 37 70 27 39 60 46 25 31 37 44 24 19 39 41 19 31 43 44 26 33 41 38 29 16 37 40 25 47 39

 1363  97 53 66 71 25 58 46 76 64 48 79 66 28 74 46 53 71 30 33 43 69 69 61 66 53 35 56 56 58 46 46 41 56 71 53 41 48 53 53 69 56
 1120  61 27 13 27 27 79 36 97 52 45 79 65 22 75 29 29 50 18 18 25 61 50 20 20 27 40 45 52 47 54 31 25 40 34 27 27 36 31  4 36 39
 1160  43 11 22 45 29 59 29 63 38 43 65 34 18 61 34 34 47 13 18 25 36 31 34 25 22 27 31 36 36 38 11 29 34 15  9  9 25 31 13 25 31
 DISC  66 29 33 47 27 66 37 79 51 45 74 55 22 70 36 38 55 20 22 30 55 49 37 36 33 34 44 48 47 46 29 31 43 39 29 25 36 38 22 42 42

 1350  66 55 51 67 40 62 67 79 53 63 76 66 51 64 58 53 67 51 50 51 56 72 60 65 46 58 33 69 58 64 59 61 68 59 57 44 50 46 35 50 58
 1070  58 12 37 34 14 57 23 75 42 53 74 43 39 39 25 32 50 25 21 23 34 29 30 17 19 40 20 25 35 42 23 26 58 37 24  7  9 30 13 25 33
 DISD  62 35 45 52 28 60 47 77 48 59 75 56 45 53 43 44 59 39 37 38 46 53 46 43 34 50 27 49 48 54 43 45 64 49 42 27 32 39 25 39 46

 1360  72 24 43 46 25 62 51 77 50 56 78 58 25 62 25 31 48 26 37 30 52 35 27 33 27 46 24 33 34 41 24 26 59 46 37 15 37 30 19 26 40
 1190  42 26 42 63 15 52 52 84 42 63 73 42  5 57 26 36 63 10 10 36 52 31 15 36 10 31 10 52 31 36 15 31 68 47 15 15 15 57  0 47 36
 1210  68 33 61 74 13 71 31 83 58 58 86 64 61 77 33 59 76 33 41 44 53 50 39 39 47 39 26 53 69 75 52 48 52 51 53 35 60 46 60 39 53
 1240  87 13 60 83 46 72 47 86 72 63 93 86 72 80 61 30 83 19 36 65 60 64 54 56 79 31 53 42 58 65 38 52 58 58 47 41 68 60 54 57 60
 DISE  72 24 53 65 25 67 43 82 58 59 84 66 48 71 37 53 67 26 37 44 54 47 37 40 45 39 31 43 52 58 36 40 57 51 44 28 51 44 40 39 49

 DISA  66 36 46 55 28 57 33 73 57 52 73 60 43 59 39 46 57 39 28 45 53 47 45 41 42 43 30 48 46 60 42 39 49 52 44 28 45 33 38 44 47
 DISB  59 14 30 45 18 45 41 81 50 34 66 59 37 70 27 39 60 46 25 31 37 44 24 19 39 41 19 31 43 44 26 33 41 38 29 16 37 40 25 47 39
 DISC  66 29 33 47 27 66 37 79 51 45 74 55 22 70 36 38 55 20 22 30 55 49 37 36 33 34 44 48 47 46 29 31 43 39 29 25 36 38 22 42 42
 DISD  62 35 45 52 28 60 47 77 48 59 75 56 45 53 43 44 59 39 37 38 46 53 46 43 34 50 27 49 48 54 43 45 64 49 42 27 32 39 25 39 46
 DISE  72 24 53 65 25 67 43 82 58 59 84 66 48 71 37 53 67 26 37 44 54 47 37 40 45 39 31 43 52 58 36 40 57 51 44 28 51 44 40 39 49
 STOT  66 28 44 55 25 60 41 79 53 52 76 60 41 65 37 46 61 33 32 39 50 48 38 37 40 41 30 44 48 54 36 39 52 47 39 26 42 40 32 42 45
```

ALGEBRA I - GENERAL

INSTRUMENT AND POPULATION DESCRIPTION

This is a forty-item multiple choice test measuring the circled objectives in the curriculum strands of Structure of Real Number System (1 item), Algebraic Structure (2 item s), Equations/Inequalities (3 items), Exponents (1 item), Polynomials (3 items), Special Products/Factoring (3 items), Rational Expressions (8 items), Graphs of Linear Equations/Inequalities (7 items), Irrational Numbers (5 items), Relations/Functions (4 items), and Quadratic Equations (3 items).

The population includes all high school students (with the exception of the exam schools) who took an Algebra I/General course and for whom valid answer sheets were submitted.

SYSTEM STRENGTHS AND WEAKNESSES

Overall, students performed very poorly on this test with a system-wide average score of 40%. Generally, students appear to be mastering the domains of Algebraic Structure and Exponents and most of the items in Polynomials and Special Products/Factoring. However, of the thirty-one items in the remaining domains, there are twenty-eight items which fewer than 50% of the students answered correctly. Essentially, students do not know the domains of Equations/Inequalities, Rational Expressions, Graphs of Linear Equations/Inequalities, Irrational Numbers, Relations/Functions, and Quadratic Equations.

BOSTON PUBLIC SCHOOLS

DEPARTMENT OF EDUCATIONAL TESTING

CURRICULUM REFERENCED FINAL ALGEBRA I GENERAL

1985 - 1986

A.7	Simplify using the laws of order of operations	1	
B.4	Find the union and the intersection of sets of numbers	2	
B.7	Evaluate numerical & algebraic expressions involving ( )	3	
C.1	Translating English phrases into algebraic phrases	4	
C.5	Solve an equation with one variable contained in 2 or more terms	5	
C.10	Graph the solution set of a linear inequality on the no. line	6	
D.2	Evaluating terms involving exponents	7	
E.4	Add and subtract polynomials	8	
E.5	Multiply polynomials	9	
E.5		10	
F.4	Identify and factor special types of polynomials	11	
F.6	Identify and factor general trinomials	12	
F.7	Combining several types of factoring	13	
G.3	Writing rational expressions in the simplest form	14	
G.10	Find the lowest common denom of fractions with polynomial denoms	15	
G.5	Add and subtract fractions with monomial denominators	16	
G.11	Add and subtract rational expressions with polynomial denoms	17	
G.12	Multiply and divide rational expressions containing polynomials	18	
G.12		19	
G.13	Solving open sentences containing rational expressions	20	
G.14	Solving fractional equations and checking answers	21	
H.3	Finding the slope of a line given two points	22	
H.4	Writing the equations of a line given the slope and one point	23	
H.6	Write the equation of a line given 2 points on the line	24	
H.2	List ordered pairs that satisfy a given linear equation	25	
H.7	Graphing the line Ax + By = C by plotting points	26	
H.9	Graphing a linear equation using the slope-intersect method	27	
H.10	Solving a system of equations using addition or subtraction	28	
I.3	Simplifying radicals with numerical radicands	29	
I.4	Simplify radicals w/radicands containing algebraic expressions	30	
I.5	Multiplying radicals with the same indices	31	
I.6	Combining radicals by addition and/or subtraction	32	
I.7	Rationalizing expressions w/simple radical denominators	33	
J.1	Identify the domain and range of sets of several ordered pairs	34	
J.1		35	
J.3	Evaluating functions using functional notation (f(x)	36	
J.5	Determine if a relation is a function, use the vert. line test	37	
K.2	Solving quadratic equations by factoring	38	
K.2		39	
K.4	Solving quadratic equations by using the quadratic formula	40	

```
 420 ALG I - GEN        TECR5005            11/07/86
PERCENTAGF UF CORRECT ANSWERS PER ITEM
NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY **

SCHL    1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 TOTAL

 1040  35 63 59 27 52 28 60 66 69 31 69 68 12 64 41 30 35 25 34 37 36 27 41 32 33 31 24 46 29 27 29 49 18 39 20 43 48 30 31 21 39
 1110  39 87 78 42 75 37 75 71 74 68 81 81  0 78 59 25 28 41 37 52 54 17 35 35 45 52 67 48 40 68 40 59 35 57 73 54 75 42 51 57 53
 DISA  37 73 67 34 62 32 67 69 71 46 74 74  7 70 48 28 32 32 36 43 44 23 38 33 38 40 42 47 34 44 34 53 25 46 42 48 59 35 39 36 45

 1250  37 62 45 39 36 50 36 42 54 18 60 61 38 46 43 29 42 23 18 29 26 45 50 50 36 30 28 44 32 34 32 47 38 33 55 44 49 38 20 36 39
 1100  28 70 36 21 45 33 50 49 57 15 57 52  7 57 35 29 31 21 42 43 22 17 26 29 29 19 31 52 15 22  8 42 19 36 29 33 35 21 22 21 33
 DISB  34 64 42 34 39 45 40 43 55 17 59 58 29 49 41 29 39 22 24 33 27 37 43 44 34 27 28 46 28 31 26 45 33 34 48 41 45 33 21 31 37

 1060  13 76 44 52 32 26 50 50 52 46 73 69 14 60 32 13 19 32 34 30 38 26 22 31 28 15 36 42 15 26 23 30 13 46 51 43 38 22 32 40 36
 1120  15 35 35 42 28 38 28 36 43 10 31 64  8 35 42  8 17 19 31 10 15 31 15 36 14 12 24 26 31 28 31 29 36 36 26 40 21 17 31 21 27
 1160  45 82 65 38 66 43 52 60 66 43 64 75 23 51 54 49 40 45 50 28 41 34 33 35 36 24 33 48 31 42 32 47 23 40 36 48 31 30 40 36 44
 DISC  27 68 50 44 45 36 45 50 56 35 59 71 16 50 44 27 27 34 40 24 33 31 25 34 28 18 32 40 26 33 29 37 23 41 39 44 31 24 35 34 37

 1070  26 68 43 23 54 26 50 60 64 26 60 68  9 42 34 29 20 15 25 26 29 16 24 34 38 15 33 57 19 32 17 52 18 36 37 44 34 32 34 26 35
 DISD  26 68 43 23 54 26 50 60 64 26 60 68  9 42 34 29 20 15 25 26 29 16 24 34 38 15 33 57 19 32 17 52 18 36 37 44 34 32 34 26 35

 1080  43 83 79 54 68 30 69 77 77 42 79 85  8 55 34 27 37 41 50 46 46 19 47 43 42 19 35 57 30 26 22 55 37 25 46 41 56 47 51 31 47
 1190  19 60 39 32 42 21 63 49 68 42 66 74  7 60 25 31 17 26 24 22 20 32 15 38 17 11 16 49 36 50  9 33 14 31 40 48 27 23 39 23 34
 1210  46 83 54 33 61 42 65 60 63 31 58 64 21 57 45 22 37 29 39 52 49 19 41 42 41 23 39 58 36 41 50 65 54 56 58 63 44 57 55 26 47
 1240  17 83 34 26 54 39 52 68 70 32 73 67  3 57 31 25 23 13 26 29 33 16 24 27 30  8 31 53 33 45 16 57 22 29 44 46 51 37 34 28 37
 DISE  34 79 55 38 58 34 64 65 70 37 69 73 10 57 35 26 30 29 37 40 39 21 34 38 34 16 32 55 33 39 26 54 34 36 48 50 46 43 46 27 42

 DISA  37 73 67 34 62 32 67 69 71 46 74 74  7 70 48 28 32 32 36 43 44 23 38 33 38 40 42 47 34 44 34 53 25 46 42 48 59 35 39 36 45
 DISB  34 64 42 34 39 45 40 43 55 17 59 58 29 49 41 29 39 22 24 33 27 37 43 44 34 27 28 46 28 31 26 45 33 34 48 41 45 33 21 31 37
 DISC  27 68 50 44 45 36 45 50 56 35 59 71 16 50 44 27 27 34 40 24 33 31 25 34 28 18 32 40 26 33 29 37 23 41 39 44 31 24 35 34 37
 DISD  26 68 43 23 54 26 50 60 64 26 60 68  9 42 34 29 20 15 25 26 29 16 24 34 38 15 33 57 19 32 17 52 18 36 37 44 34 32 34 26 35
 DISE  34 79 55 38 58 34 64 65 70 37 69 73 10 57 35 26 30 29 37 40 39 21 34 38 34 16 32 55 33 39 26 54 34 36 48 50 46 43 46 27 42
 STUT  32 72 53 36 53 35 55 59 64 34 65 70 14 55 39 27 30 28 34 35 36 25 33 37 34 22 33 50 29 37 27 49 29 38 44 46 44 36 38 30 40
```

ALGEBRA I - COLLEGE

INSTRUMENT AND POPULATION DESCRIPTION

This is a forty-item multiple choice test measuring the circled objectives in the curriculum strands of Equations/Inequalities (2 items), Exponents (1 item), Polynomials (1 item), Special Products/Factoring (4 items), Rational Expressions (11 items), Graphs of Linear Equations/Inequalities (9 items), Irrational Numbers (6 items), Relations/Functions (3 items), and Quadratic Equations (3 items).

The population includes all high school students (with the exception of the exam schools) who took an Algebra I/College course and for whom valid answer sheets were submitted.

SYSTEM STRENGTHS AND WEAKNESSES

Overall, student performance on this test is very poor with a system-wide average score of 40%. It should be noted, however, that there are no schools included from either Area A or Area C. Generally, students appear to be mastering the objectives in Equations/Inequalities, Exponents, and Polynomials. However, of the thirty-six items in the remaining domains, there are thirty-three items which fewer than 50% of the students answered correctly. Essentially, according to the results of this test, students are not mastering the objectives in Special Products/Factoring, Rational Expressions, Graphs of Linear Equations/Inequalities, Irrational Numbers, Relations/Functions, and Quadratic Equations.

BOSTON PUBLIC SCHOOLS

DEPARTMENT OF EDUCATIONAL TESTING

CURRICULUM REFERENCED FINAL   ALGEBRA I COLLEGE

1985 - 1986

E.3	Simplifying polynomials by combining similar terms	1	
D.5	Multiplying expressions involving exponents	2	
C.5	Solve an equation with 1 variable contained in 2 or more terms	3	
C.7	Solve a linear inequality with one variable	4	
F.3	Identifying and factoring a monomial factor in a polynomial	5	
F.6	Identifying and factoring general trinomials	6	
F.10	Solving polynomial equations by factoring	7	
G.4	Writing rational expressions in the simplest form	8	
F.8	Combining several types of factoring	9	
G.6	Add and subtract fractions with monomial denominators	10	
G.9	Divide fractions w/monomial numerators and denominators	11	
G.10	Using multiplication of (-1) to change signs of rational expr.	12	
G.11	Find the lowest common denom of fractions w/polynomial denoms	13	
G.12	Add and subtract rational expressions with polynomial denoms	14	
G.13	Multiply and divide rational expressions containing polynomials	15	
G.18	Solve inequalities containing radical expressions & check answ.	16	
G.17	Solving fractional equations and checking answers	17	
G.19	Applying rational expressions in solving word problems	18	
H.2	List ordered pairs that satisfy a given linear equation	19	
H.3	Finding the slope of a line given two points	20	
H.4	Write the equation of a line given the slope and one point	21	
H.7	Graphing the line Ax + By = C by plotting points	22	
H.5	Write the equation of a line given the slope & y-axis intercept	23	
G.20	Solving problems involving ratios	24	
H.10	Solve a system of equations using addition or subtraction	25	
H.11	Solve a system of equations using substitution	26	
H.14	Region on a coordinate system for solution of Ax + By > C	27	
I.1	Find the roots of numbers that have rational roots	28	
I.5	Simplify radicals w/radicands containing algebraic expressions	29	
I.6	Multiplying radicals with the same indices	30	
I.8	Combining radicals by addition and/or subtraction	31	
I.9	Rationalizing expressions with radical denominators	32	
I.10	Solving and checking equations w/radical expressions	33	
J.1	Identify the domain and range of sets of several ordered pairs	34	
K.3	Solving quadratic equations by completing the square	35	
J.5	Determine if a relation is a function,use the vert. line test	36	
K.4	Solving quadratic equations by using the quadratic formula	37	
K.6	Identify roots of quadratic equations real/not real	38	
J.2	Drawing a graph representing a relation	39	
H.16	Solve geometric word problems involving two linear equations	40	

```
 421 ALG I - COL        TECR5005            11/07/86
PERCENTAGE OF CORRECT ANSWERS PER ITEM
NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY **

SCHL     1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 TOTAL

 1250   35  5  7 57  5 35  5 85  0 27  2  5  7 10 10  0 57 15 50 15 22 10 12 17 25 27 12 57 50 12 30 27  2 20 12 42 10  7 35 37 22
 DISB   35  5  7 57  5 35  5 85  0 27  2  5  7 10 10  0 57 15 50 15 22 10 12 17 25 27 12 57 50 12 30 27  2 20 12 42 10  7 35 37 22

 1350   68 87 71 57 92 76 50 61 64 68 72 12 49 53 61 42 38 45 33 61 51 23 58 43 66 75 48 44 55 43 54 43 23 42 44 45 28 33 52 36 52
 DISD   68 87 71 57 92 76 50 61 64 68 72 12 49 53 61 42 38 45 33 61 51 23 58 43 66 75 48 44 55 43 54 43 23 42 44 45 28 33 52 36 52

 1190   59 77 40 45 31 86 31 50 50 72 63  4  9 13 45 36 18 13 31 27 27 18 45 36 54 59 22 27 45 31 50 27  4 22 68  4 13 40 45 54 37
 1210   56 73 68 35 63 43 22 42 33 12 28 10 26 42 19 40 17 43 28 31 36 28 54 36 24 50 35 24 22 28 50 33 19 35 33 38 21 29 50 40 35
 DISE   56 74 60 37 54 55 25 44 37 29 37  8 21 34 26 39 17 36 29 30 34 25 51 36 32 53 31 25 29 29 50 31 15 31 43 29 18 32 49 44 36

 DISA
 DISB   35  5  7 57  5 35  5 85  0 27  2  5  7 10 10  0 57 15 50 15 22 10 12 17 25 27 12 57 50 12 30 27  2 20 12 42 10  7 35 37 22
 DISC
 DISD   68 87 71 57 92 76 50 61 64 68 72 12 49 53 61 42 38 45 33 61 51 23 58 43 66 75 48 44 55 43 54 43 23 42 44 45 28 33 52 36 52
 DISE   56 74 60 37 54 55 25 44 37 29 37  8 21 34 26 39 17 36 29 30 34 25 51 36 32 53 31 25 29 29 50 31 15 31 43 29 18 32 49 44 36
 STOT   57 67 55 50 62 61 32 59 42 46 46  9 31 38 38 33 34 36 35 41 39 21 47 35 46 58 35 39 44 32 48 35 16 34 37 38 21 28 48 39 40
```

ALGEBRA II - TRIGONOMETRY

INSTRUMENT AND POPULATION DESCRIPTION

This is a forty-item multiple choice test measuring the circled objectives in the curriculum strands of Real Numbers/ Properties/Operations (2 items), Equations and Inequalities Involving One Variable (3 items), Linear Equations (3 items), Polynomials/Factoring (3 items), Relations/Functions/Transformations (1 items), Fractional Expressions/Equations (3 items), Exponents/Powers/Roots (3 items), Complex Numbers (2 items), Quadratic Equations/Functions (4 items), Systems of Equations/ Inequalities (3 items), Polynomial Functions (3 items), Equations of Second Degree (4 items), Exponential/Logarithmic Functions (3 items), Sequence/Series (3 items).

The population includes all high school students (with the exception of the exam schools) who took an Algebra II/Trigonometry course and for whom valid answer sheets were submitted.

SYSTEM STRENGTHS AND WEAKNESSES

Overall, student performance was poor on this test with a system-wide average score of 55%. Generally, students appear to be mastering the objectives tapped in the domains of Real Numbers: Their Properties/Operations, Equations/Inequations Involving One Variable, Relations/Functions/Transformations, Systems of Equality/Inequality, and Sequence/Series. Within the domains of Linear Equations, Polynomials/Factoring, Fractional Expressions/Equations, Exponents/Powers/Roots, Complex Numbers, and Quadratic Equations/Functions, most of the items are being mastered.

The most severe deficits as strands lie in the domains of Polynomial Functions, Equations of Second Degree, and Exponential/ Logarithmic Functions. Of the ten items in those domains, there are seven items which fewer than 50% of the students answered correctly.

BOSTON PUBLIC SCHOOLS

DEPARTMENT OF EDUCATIONAL TESTING

CURRICULUM REFERENCED FINAL ALGEBRA II/TRIGONOMETRY

1985 - 1986

A.6	Simplify expressions involving absolute value	1
A.5	Simplifying algebraic expressions	2
B.5	Solve linear inequalities in 1 var. & graph solution on no. line	3
B.2	Solving first-degree equations in one variable	4
B.3	Express English sentences in math equations & solve them	5
C.1	Locating points on the Cartesian plane	6
C.9	Change a linear equat. to the y form & identify slope & y interc	7
C.12	Equation of a line passing thru a point w/parallel & perpendicul	8
D.3	Add, subtract and multiply polynomials	9
D.7	Factoring a binomial difference between sq/sum or sq/cube	10
D.11	Solving inequalities by factoring	11
E.7	Evaluate a function for a given value of x	12
F.1	Multiply & divide rational expressions by simplifying	13
F.3	Simplifying complex expressions	14
F.8	Solve problems involving direct and indirect variations	15
G.6	Converting radical & exponential forms of an expression	16
G.1	Laws of exponents in simplification of algebraic expressions	17
G.5	Operations of +,-,x,÷ on radical expressions	18
H.1	Simplifying expressions containing complex numbers	19
H.2	Add, subtract, multiply & divide complex numbers	20
I.2	Solve quadratic equations by factoring & use the quad. formula	21
I.2		22
I.4	Value of the discriminant and state the nature of the roots	23
I.10	Find the x intercept (s) of the graph of a quadratic function	24
J.3	Solving a system of linear equations by addition	25
J.1	Solving a system of linear equations graphically	26
J.4	Use pairs of linear equations in 2 variables to solve problems	27
K.3	Use Remainder Thm. to find the remain. when polynom. is ÷ by x-r	28
K.7	Write a polynomial P(x), given the zeroes of the polynomial	29
K.8	List possible rational roots of polynom. use synthetic division	30
L.1	Find distance between 2 pts. in a plane, use distance formula	31
L.3	Use equation of circle to find center & radius of a circle	32
L.6	Graph a hyperbola, show center, vertexes, foci & asymptotes	33
L.5	Graph a ellipse, show center, vertexes, & foci of the ellipse	34
M.3	Solving simple logarithmic equations	35
M.4	Use properties of logarithms to rewrite & simplify expressions	36
M.6	Solving exponential and logarithmic equations	37
N.5	Sequence as arithmetic & find a_n,n,d, or nth term use $a_n=a_1+(n-1)d$	38
N.3	List n terms of any series, given the general term	39
N.8	Finding the sum of n terms of a geometric series	40

```
434 ALG II-TRIG         TECR5005            11/07/86
PERCENTAGE OF CORRECT ANSWERS PER ITEM
NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY **

SCHL    1   2   3   4   5   6   7   8   9  10  11  12  13  14  15  16  17  18  19  20  21  22  23  24  25  26  27  28  29  30  31  32  33  34  35  36  37  38  39  40 TOTAL

1340   53  49  31  72  60  73  43  30  71  60  36  60  60  15  43  20  43  39  52  33  72  47  37  37  65  43  59  36  24  27  56  34  26  11  24  28  46  59  59  28  44
2070   **  **  **   0   0  **   0  **   0   0   0   0  **   0   0   0   0  **   0   0  **  **   0   0  **  **   0   0   0   0  **   0   0   0   0   0  **   0   0  **  35
DISA   54  50  32  71  60  74  42  31  70  60  35  60  61  15  42  20  42  40  51  32  72  48  37  37  65  44  58  35  24  27  57  34  25  11  24  28  47  58  58  30  44

1250   **  **  **  **  **   0  **   0  **  **   0   0  **   0  **   0  **   0  **   0   0  **  **  **   0  **  **  **   0  **   0  **  **   0   0   0  **  **   0   0  57
1100   67  67  45  51  61  70  54  29  74  51  38  61  35  29  54  25  48  41  35  19  51  58  29  58  51  48  51  25  12  70  45  48  38  19  19  22  45  25  54  29  44
DISB   68  68  46  53  62  68  56  28  75  53  37  59  37  28  56  25  50  40  37  18  50  59  31  59  50  50  53  28  12  71  43  50  40  18  18  21  46  28  53  28  44

1060   55  77   0  11  33  44  11   0  11  33  22  44  33   0  44  11  33  33  22   0  44  33  22  11  55  33  44  11  11  22  66  22  11  11  11   0  11  22  11   0  24
1160   **  **  80  80  40  **  80  **  **  **  **  40  40  40  **  20  40  **  80  60   0  80   0  40  20  80  80  80  40  60  40  60  20  80  20  60  60  80  60  60  63
DISC   71  85  28  35  35  64  35  35  42  57  50  42  35  14  64  14  35  57  42  21  28  50  14  21  42  50  57  35  21  35  57  35  14  35  14  21  28  42  28  21  38

1050   78  84  74  89  74  81  75  43  91  78  60  90  80  80  59  63  63  77  79  63  79  83  56  78  85  72  90  66  67  49  83  71  61  45  75  74  57  75  80  69  72
4260   **  **   0  **  **  **  **   0  **  **   0   0  **   0  **  **  **  **  **   0  **   0   0   0   0   0   0   0   0  **   0  **  **   0  **   0  **   0   0   0  50
1070   87  75  53  82  63  78  70  31  82  43  21  65  63  56  78  17  48  68  78  82  53  56  70  41  75  51  82  41  63  68  68  87  48  31  68  97  **  75  85  70  64
DISD   81  81  67  87  71  80  74  39  88  67  47  81  75  72  65  48  59  74  79  69  71  73  60  65  81  64  87  57  65  56  77  76  57  40  73  81  72  75  81  69  70

1080   68  56  44  80  64  76  68  36  84  68  12  60  76  16  36  28  44  64  80  28  56  60  32  60  60  28  80  56  12  20  48  24  32  28  32  28  52  56  40  32  48
1190   61  69  38  84  76  76  46   7  76  61  15  61  84  30  53  38  61  84  61  15  61  46  38  46  76   0  84  23   0   7  76  30  53  46  38  46  53  84  46  61  50
1210   72  62  56  75  70  75  75  50  74  62  19  75  67  43  54  38  61  66  72  38  61  59  38  54  66  51  40  25  41  41  35  35  48  22  48  29  56  24  37  61  52
DISE   70  62  51  78  70  76  70  41  77  64  17  70  72  35  50  36  57  68  73  33  60  58  37  55  66  39  56  33  29  32  44  32  45  27  43  31  55  40  39  54  51

DISA   54  50  32  71  60  74  42  31  70  60  35  60  61  15  42  20  42  40  51  32  72  48  37  37  65  44  58  35  24  27  57  34  25  11  24  28  47  58  58  30  44
DISB   68  68  46  53  62  68  56  28  75  53  37  59  37  28  56  25  50  40  37  18  50  59  31  59  50  50  53  28  12  71  43  50  40  18  18  21  46  28  53  28  44
DISC   71  85  28  35  35  64  35  35  42  57  50  42  35  14  64  14  35  57  42  21  28  50  14  21  42  50  57  35  21  35  57  35  14  35  14  21  28  42  28  21  38
DISD   81  81  67  87  71  80  74  39  88  67  47  81  75  72  65  48  59  74  79  69  71  73  60  65  81  64  87  57  65  56  77  76  57  40  73  81  72  75  81  69  70
DISE   70  62  51  78  70  76  70  41  77  64  17  70  72  35  50  36  57  68  73  33  60  58  37  55  66  39  56  33  29  32  44  32  45  27  43  31  55  40  39  54  51
STDT   70  68  51  75  66  76  63  36  78  63  35  70  66  43  55  35  53  61  66  44  64  61  44  54  69  51  67  42  39  43  59  50  43  28  46  47  57  55  59  51  55
```

CALCULUS

INSTRUMENT AND POPULATION DESCRIPTION

This is a test comprised of thirty multiple choice items and five essays measuring the curriculum strands of Elementary Functions (9 multiple choice items), Differential Calculus (10 multiple choice items and 3 essays), Integral Calculus (11 multiple choice items and 2 essays).

The population includes all high school students (with the exception of the exam schools) who took a Calculus course and for whom valid answer sheets were turned in. In this report the valid data is only for one high school in Area A.

STRENGTHS AND WEAKNESSES

Overall, students performed fairly well on this test with an average score of 62%. Generally, students appear to be mastering the objectives in the Elementary Functions domain and in the Integral Calculus domain, although in the latter domain of eleven items there are two that fewer than 50% of the students answered correctly. Those two items measure approximate areas by upper and lower (Riemann) sums and the definition of the definite integral as the limit of sum. Within the Differential Calculus domain of the ten items there are four that fewer than 50% of the students answered correctly. Those items measure understanding the derivative, applying techniques, applying Rolle's theorem, and recognizing the relation between continuity and differentiability.

BOSTON PUBLIC SCHOOLS

DEPARTMENT OF EDUCATIONAL TESTING

CURRICULUM REFERENCED FINAL CALCULUS

1985 - 1986

A.1	Recognizing, analyzing, applying the properties and drawing the graph of elementary functions	1
A.2	Relation between the domain & range of functions & compositio	2
A.3	Handling functions involving sums, products, quotients, etc.	3
A.6	Analyze restrictions in domain and equations of asymptotes	4
A.7	Recognize even & odd functions; understand concepts of period	5
A.8	Using trigonometric identities	6
A.9	Understand relation between functions: a^x and $\log_a x$ & graphs	7
A.10	Concept of calculus is that of limit, the law of limits	8
A.12	Stating the definition of continuity, theorem of continuity	9
B.1	Understanding the derivative	10
B.2	Use the rules of differentiation of constant,power, sum, etc.	11
B.3	Stating & applying the chain rule for composite functions	12
C.10	Approximate areas by Upper & Lower (Riemann) sums & Trap.rule	13
B.5	Making a survey of the functions studied	14
B.15	Applying techniques, curve tracing, concavity, maxima-minima	15
B.9	Expressing derivatives of higher order	16
B.10	Understand, state and apply Rolle's theorem	17
B.11	Understand the concepts of increasing and decreasing function	18
B.12	Recognize the relation between continuity & differentiability	19
B.13	Stating and applying l'Hopital's rule	20
C.1	Recognize the behavior of the graph of f(x) and f(x) + k	21
C.2	Recognize the function given the derivative	22
C.3	Recognize that if F has a deriv. f, F is an antiderivative f	23
C.4	Understanding indefinite integrals	24
C.5	Recognize expressions like $\frac{dy}{dx}$ = f(x) as differential equat.	25
C.6	Applying techniques of integration	26
C.8	Understanding the concept of definite integral as an area	27
C.9	State the definition of the definite integral as limit of sum	28
C.11	Stating and applying the Fundamental Theorems of Calculus	29
C.13	Apply integration to find the average val. of func. interval	30
B.1	See above descriptions	31
B.2,B.11,B.15	See above descriptions	32
B.4 B.7 B.8	Differentiate implicitly defined functions "Geometric" derivation of $\lim_{\theta \to 0} \frac{\sin\theta}{\theta}$ Differentiate exponential functions	33
C.2,C.5,C.6	See above descriptions	34
C.6,C.8,C.13	See above descriptions	35

```
 444 CALCULUS           TECR5005            11/07/86
PERCENTAGE OF CORRECT ANSWERS PER ITEM
NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY **

SCHL    1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 TOTAL

 1040  76 69 53 92 84 53 92 61 53 30 61 69 30 69 23 53 38 69 30 53 76 69 69 84 61 84 76 30 69 69 62
 DISA  76 69 53 92 84 53 92 61 53 30 61 69 30 69 23 53 38 69 30 53 76 69 69 84 61 84 76 30 69 69 62

 DISA  76 69 53 92 84 53 92 61 53 30 61 69 30 69 23 53 38 69 30 53 76 69 69 84 61 84 76 30 69 69 62
 DISB
 DISC
 DISD
 DISE
 STDT  76 69 53 92 84 53 92 61 53 30 61 69 30 69 23 53 38 69 30 53 76 69 69 84 61 84 76 30 69 69 62
```

ADVANCED MATHEMATICS

INSTRUMENT AND POPULATION DESCRIPTION

This is a test comprised of twenty multiple choice items and five essays measuring the curriculum strands of Relations/Functions (1 item), Composition/Inverses (1 item), Trigonometric/Circular Functions (5 multiple choice items and 1 essay), Conic Sections (3 multiple choice items and 1 essay), Graphs of Polar Equations (1 multiple choice item and 1 essay), Limits of Functions (1 multiple choice item and 1 essay), Polynomial Functions (1 item), Exponential/Logarithmic Functions (1 item), Sequence/Series/Limits (1 item), Permutations/Combinations (1 item), Binomial Theory (1 item), Math Induction (1 essay), Probability (1 item), Vectors (2 items), and Complex Numbers (2 items).

The population includes all high school students (with the exception of the exam schools) who took an Advanced Mathematics course and for whom valid answer sheets were turned in.

SYSTEM STRENGTHS AND WEAKNESSES

Overall, students performed poorly on this test with an average score of 47%. Generally, students appear to be mastering the domains of Composition/Inverses, Trigonometric/Circular Functions, Graphs of Polar Equations/Parametric Equations, and Exponential/Log Functions. However, of the thirteen items in the remaining domains, there are eleven items which fewer than 50% of the students answered correctly. Essentially, according to the results of this test, students are not mastering the objectives in the domains of Relations/Functions, Conic Sections, Limits of Functions, Polynomial Functions, Sequence/Series/Limits, Binomial Theory, Probability, Vectors, and Complex Numbers.

BOSTON PUBLIC SCHOOLS

DEPARTMENT OF EDUCATIONAL TESTING ADVANCED MATHEMATICS

CURRICULUM REFERENCED FINAL

1985 - 1986

B.5	Recognize effect on graph of a relation when f(x) is replaced by f(x+h); f(x) + k; f(x+h) + k; cf(x), f(cx), [f(x)], f([x])	1
C.1	Find composite of functions, state domain & range, draw their graphs recognize the relation of corresponding points $(a,b) \rightarrow (b,a)$	2
D.2	Apply formulas for arc length & area of a circular sector, in terms of radius & central angle, with r=1, the special, important case	3
D.2		4
D.7	Understand & apply the concepts of amplitude, period, & phase shift; In graphing, what portion of graph only needs to be plotted	5
D.13	Evaluate expressions involving inverse circular functions; draw graphs of inverse functions	6
E.4	Recognize equation of a hyperbola; state its domain; identify transverse & conjugate axes, vertices, foci, eccentricity, of asymptotes	7
E.6	Analyze coefficients of general quadratic, including degenerate cases	8
G.4	Use without proof the limit theorems, the concepts of left-hand & right-hand limits & draw the correct conclusion to exist. of limit	9
H.5	Use the factor & remainder theorem in probs. & locate multiple zeros	10
I.4	Recognize logarithm function as inverse of strictly increasing (one-to-one) function, the exponential function	11
J.8	Recognize convergence & divergence of sequences & series, & find the limit if it exists	12
K.4	Solve probs. involving permutations, permutations w/repetitions, & circular permutations	13
L.3	Able to write any term or entire expansion of $(a+b)^n$, use binomial coefficients in the form C(n,r) or $\binom{n}{r}$	14
N.3	Solve probs. by applying the binomial probability function	15
O.4	Give direction vector, a vector equation & parametric equations of a line, given two points	16
O.6	Define the dot (inner) product, & from the definition, develop the properties of the dot product	17
P.3	Find product of 2 or more complex nos. & recognize role of addition identities of trigonometric functions; compute powers of complex #	18
P.5	Use the theorem for n negative and find roots of complex numbers	19
F.2	Use the relations $x=r\cos\theta$ & $y=r\sin\theta$ to translate equations from one system to the other	20
D.13	Evaluate expressions involving inverse circular functions; take note of symbols used, Sin x, Cos x, Tan x, & Arc sin a ....etc.	21
E.7	Rewrite equation of conic in standard form, identify the curve, state its characters, sketch the graph	22
F.3	Recognize polar equations for the straight line, circle, cardiod; make a table of values, draw graphs, & find points of intersection	23
M.5	Use mathematical induction to prove statements where direct and indirect proofs fail	24
G.5	Understand notion of limiting position of a secant to a curve and definition of the slope of a curve at a point	25

```
 441 ADV MATH             TECR5005             11/07/80
PERCENTAGE OF CORRECT ANSWERS PER ITEM
NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY **

SCHL     1   2   3   4   5   6   7   8   9  10  11  12  13  14  15  16  17  18  19  20 TOTAL

 1040   45  80  65  75  70  85  45  80  80  10  60  70  90  60  60  55  70  60  90  70  66
 1110    5  35  75  75  70  60   5  15  35   5  80  45  75  40  50  15  80  35  15  70  44
 DISA   25  57  70  75  70  72  25  47  57   7  70  57  82  50  55  35  75  47  52  70  55

 1100   35  23  64  64  58  41  58  58  52  64  64  64  64  58  70  47  58  47  41  41  54
 DISB   35  23  64  64  58  41  58  58  52  64  64  64  64  58  70  47  58  47  41  41  54

 2030    0   0   0   0   0   0   0   0   0   0   0   0   0  **  **   0   0   0   0  **  15
 1160   20  80  70  20  30   0  30  20  10  10  10  10  10  10   0   0  10   0   0  50  19
 DISC   18  72  63  18  27   0  27  18   9   9   9   9   9  18   9   0   9   0   0  54  19

 1050   64  92  85  78   0  57   0  50  50   7  78   0  **   7  28   7  35  35  50  28  42
 DISD   64  92  85  78   0  57   0  50  50   7  78   0  **   7  28   7  35  35  50  28  42

 DISA   25  57  70  75  70  72  25  47  57   7  70  57  82  50  55  35  75  47  52  70  55
 DISB   35  23  64  64  58  41  58  58  52  64  64  64  64  58  70  47  58  47  41  41  54
 DISC   18  72  63  18  27   0  27  18   9   9   9   9   9  16   9   0   9   0   0  54  19
 DISD   64  92  85  78   0  57   0  50  50   7  78   0  **   7  28   7  35  35  50  28  42
 DISE
 STOT   32  58  70  65  50  53  28  46  48  19  62  42  71  40  47  28  56  39  42  54  47
```

SCIENCE

ELEMENTARY AND MIDDLE

SCIENCE

GRADES KII, 1, AND 2

INSTRUMENT AND POPULATION DESCRIPTION

Each of the tests is a twenty-five item multiple choice test measuring selected circled objectives in the curriculum strands of Science Skills/Processes, Science/Society, Life Science, Human Biology/Health, Physical Science, Earth Science, and Astronomy.

The population includes all students enrolled in Kindergarten II, Grade 1, or Grade 2 who took an on-level test and for whom valid scores were reported.

SYSTEM STRENGTHS AND WEAKNESSES

Because of the young age of the students taking these tests they responded by writing directly in the test booklet, rather than on separate answer sheets. Teachers hand-scored the booklets and recorded the students' total scores on data collection sheets, thus individual item data for analysis are not available. Overall, students performed well on all the tests with system-wide average scores of 84% for Kindergarten II, 88% for Grade 1, and 84% for Grade 2.

BOSTON PUBLIC SCHOOLS
CURRICULUM REFERENCE TEST JUNE 1986 AVERAGE SCORE REPORT
SCIENCE - LEVEL KII

SCHOOL CODE	SCHOOL NAME	// //	SCIENCE (OUT OF 25 ITEMS)
4160	GARDNER ELEMENTARY	/	20
4170	GARFIELD ELEMENTARY	/	19
4173	WINSHIP ELEMENTARY	/	21
4220	HAMILTON ELEMENTARY	/	22
4221	BALDWIN ELEMENTARY	/	20
4570	TOBIN ELEMENTARY	/	21
4571	FARRAGUT ELEMENTARY	/	20
4010	AGASSIZ ELEMENTARY	/	22
4240	ELLIS ELEMENTARY	/	21
4241	HIGGINSON ELEMENTARY	/	20
4270	J KENNEDY ELEMENTARY	/	21
4310	LONGFELLOW ELEMENTARY	/	23
4311	MANNING ELEMENTARY	/	22
4370	MENDELL ELEMENTARY	/	20
4371	FULLER ELEMENTARY	/	21
4430	PARKMAN ELEMENTARY	/	22
DISA		/	21
4030	BEETHOVEN ELEMENTARY	/	20
4031	KILMER ELEMENTARY	/	22
4081	BATES ELEMENTARY	/	19
4082	MOZART ELEMENTARY	/	20
4290	LEE ELEMENTARY	/	18
4560	SUMNER ELEMENTARY	/	19
4561	PHILBRICK ELEMENTARY	/	23

12/23/86

BOSTON PUBLIC SCHOOLS
CURRICULUM REFERENCE TEST JUNE 1986 AVERAGE SCORE REPORT
SCIENCE - LEVEL XII

TLCR97D02

SCHOOL CODE	SCHOOL NAME	// //	SCIENCE (OUT OF 25 ITEMS)
4690	MATTAHUNT ELEMENTARY	/	22
4070	CHITTICK ELEMENTARY	/	19
4080	CONLEY ELEMENTARY	/	23
4151	TAYLOR ELEMENTARY	/	19
4190	E GREENWOOD ELEMENTARY	/	23
4192	F ROOSEVELT ELEMENTARY	/	22
4200	GREW ELEMENTARY	/	20
4201	CHANNING ELEMENTARY	/	22
4670	P A SHAW ELEMENTARY	/	17
DISR		/	20
4051	DICKERMAN ELEMENTARY	/	22
4130	S GREENWOOD ELEMENTARY	/	19
4131	ENDICOTT ELEMENTARY	/	24
4140	EVERETT ELEMENTARY	/	21
4150	FIFIELD ELEMENTARY	/	19
4250	HOLLAND ELEMENTARY	/	21
4340	MARSHALL ELEMENTARY	/	
4350	MATHER ELEMENTARY	/	19
4390	KENNY ELEMENTARY	/	23
4391	OHEARN ELEMENTARY	/	21
4400	MURPHY ELEMENTARY	/	
4550	STONE ELEMENTARY	/	21
4022	PERKINS ELEMENTARY	/	21
4052	WINTHROP ELEMENTARY	/	19

BOSTON PUBLIC SCHOOLS
CURRICULUM REFERENCE TEST JUNE 1986 AVERAGE SCORE REPORT
SCIENCE - LEVEL KII

SCHOOL CODE	SCHOOL NAME	// //	SCIENCE (OUT OF 25 ITEMS)
4100	DEVER ELEMENTARY	/	21
4120	EMERSON ELEMENTARY	/	18
4121	MASON ELEMENTARY	/	21
4530	RUSSELL ELEMENTARY	/	22
4531	CLAP ELEMENTARY	/	21
4590	TYNAN ELEMENTARY	/	23
4592	PERRY ELEMENTARY	/	22
4630	CONDON ELEMENTARY	/	20
DISC		/	21
4280	KENT ELEMENTARY	/	21
4283	WPRESCOTT ELEMENTARY	/	22
4381	ELIOT ELEMENTARY	/	21
4640	BLACKSTONE ELEMENTARY	/	20
4650	QUINCY ELEMENTARY	/	21
4062	BRADLEY ELEMENTARY	/	20
4321	ALIGHIERI ELEMENTARY	/	22
4322	OTIS ELEMENTARY	/	21
4361	ADAMS ELEMENTARY	/	21
4541	P KENNEDY ELEMENTARY	/	20
4543	ODONNELL ELEMENTARY	/	20
DISD		/	21
4061	GUILD ELEMENTARY	/	22
4113	HALE ELEMENTARY	/	21
4210	HALEY ELEMENTARY	/	

12/23/86 TECR97D02

BOSTON PUBLIC SCHOOLS
CURRICULUM REFERENCE TEST JUNE 1986 AVERAGE SCORE REPORT
SCIENCE - LEVEL KII

SCHOOL CODE	SCHOOL NAME	// //	SCIENCE (OUT OF 25 ITEMS)
4230	HENNIGAN ELEMENTARY	/	22
4271	CURLEY ELEMENTARY	/	21
4360	MCKAY ELEMENTARY	/	21
4410	OHRENBERGER ELEMENTARY	/	23
4580	TROTTER ELEMENTARY	/	22
4610	HORACE MANN SCHOOL	/	16
4620	JACKSON MANN ELEMENTARY	/	21
DISE		/	22
DISA		/	21
DISB		/	20
DISC		/	21
DISD		/	21
DISE		/	22
STOT	SYSTEM WIDE TOTAL	/	21

12/24/86

BOSTON PUBLIC SCHOOLS
CURRICULUM REFERENCE TEST JUNE 1986 AVERAGE SCORE REPORT
SCIENCE LEVEL 1

SCHOOL CODE	SCHOOL NAME	// //	SCIENCE (OUT OF 25 ITEMS)
4160	GARDNER ELEMENTARY	/	23
4170	GARFIELD ELEMENTARY	/	21
4173	WINSHIP ELEMENTARY	/	21
4220	HAMILTON ELEMENTARY	/	22
4221	BALDWIN ELEMENTARY	/	23
4570	TOBIN ELEMENTARY	/	23
4571	FARRAGUT ELEMENTARY	/	23
4010	AGASSIZ ELEMENTARY	/	22
4240	ELLIS ELEMENTARY	/	21
4241	HIGGINSON ELEMENTARY	/	23
4270	J KENNEDY ELEMENTARY	/	23
4310	LONGFELLOW ELEMENTARY	/	21
4311	MANNING ELEMENTARY	/	23
4370	MENDELL ELEMENTARY	/	21
4371	FULLER ELEMENTARY	/	22
4430	PARKMAN ELEMENTARY	/	24
DISA		/	22
4030	BEETHOVEN ELEMENTARY	/	23
4031	KILMER ELEMENTARY	/	22
4081	BATES ELEMENTARY	/	22
4082	MOZART ELEMENTARY	/	22
4290	LEE ELEMENTARY	/	23
4560	SUMNER ELEMENTARY	/	23
4561	PHILBRICK ELEMENTARY	/	22

BOSTON PUBLIC SCHOOLS
CURRICULUM REFERENCE TEST JUNE 1986 AVERAGE SCORE REPORT
SCIENCE LEVEL 1

SCHOOL CODE	SCHOOL NAME	// //	SCIENCE (OUT OF 25 ITEMS)
4690	MATTAHUNT ELEMENTARY	/	22
4070	CHITTICK ELEMENTARY	/	22
4080	CONLEY ELEMENTARY	/	22
4151	TAYLOR ELEMENTARY	/	23
4192	F ROOSEVELT ELEMENTARY	/	21
4200	GREW ELEMENTARY	/	23
4201	CHANNING ELEMENTARY	/	23
4670	P A SHAW ELEMENTARY	/	23
DISB		/	22
4051	DICKERMAN ELEMENTARY	/	21
4130	S GREENWOOD ELEMENTARY	/	22
4131	ENDICOTT ELEMENTARY	/	21
4140	EVERETT ELEMENTARY	/	22
4150	FIFIELD ELEMENTARY	/	23
4250	HOLLAND ELEMENTARY	/	
4340	MARSHALL ELEMENTARY	/	23
4350	MATHER ELEMENTARY	/	21
4390	KENNY ELEMENTARY	/	23
4391	OHEARN ELEMENTARY	/	23
4400	MURPHY ELEMENTARY	/	21
4550	STONE ELEMENTARY	/	22
4022	PERKINS ELEMENTARY	/	22
4052	WINTHROP ELEMENTARY	/	25
4100	DEVER ELEMENTARY	/	22

12/24/86

BOSTON PUBLIC SCHOOLS
CURRICULUM REFERENCE TEST JUNE 1986 AVERAGE SCORE REPORT
SCIENCE LEVEL 1

TECR99002

SCHOOL CODE	SCHOOL NAME	// //	SCIENCE (OUT OF 25 ITEMS)
4120	EMERSON ELEMENTARY	/	22
4121	MASON ELEMENTARY	/	22
4530	RUSSELL ELEMENTARY	/	22
4531	CLAP ELEMENTARY	/	22
4590	TYNAN ELEMENTARY	/	22
4592	PERRY ELEMENTARY	/	22
4630	CONDON ELEMENTARY	/	22
DISC		/	22
4280	KENT ELEMENTARY	/	23
4283	WPRESCOTT ELEMENTARY	/	23
4381	ELIOT ELEMENTARY	/	22
4640	BLACKSTONE ELEMENTARY	/	22
4650	QUINCY ELEMENTARY	/	22
4062	BRADLEY ELEMENTARY	/	23
4321	ALIGHIERI ELEMENTARY	/	23
4322	OTIS ELEMENTARY	/	22
4361	ADAMS ELEMENTARY	/	23
4541	P KENNEDY ELEMENTARY	/	23
4543	ODONNELL ELEMENTARY	/	23
DISD		/	23
4053	HERNANDEZ ELEMENTARY	/	22
4061	GUILD ELEMENTARY	/	24
4113	HALE ELEMENTARY	/	22
4210	HALEY ELEMENTARY	/	23

12/24/86

BOSTON PUBLIC SCHOOLS
CURRICULUM REFERENCE TEST JUNE 1986 AVERAGE SCORE REPORT
SCIENCE LEVEL 1

TECR99D02

SCHOOL CODE	SCHOOL NAME	// //	SCIENCE (OUT OF 25 ITEMS)
4230	HENNIGAN ELEMENTARY	/	22
4271	CURLEY ELEMENTARY	/	22
4360	MCKAY ELEMENTARY	/	20
4410	OHRENBERGER ELEMENTARY	/	23
4580	TROTTER ELEMENTARY	/	22
4610	HORACE MANN SCHOOL	/	19
4620	JACKSON MANN ELEMENTARY	/	21
DISE		/	22
DISA		/	22
DISB		/	22
DISC		/	22
DISD		/	23
DISE		/	22
STOT	SYSTEM WIDE TOTAL	/	22

12/29/86

BOSTON PUBLIC SCHOOLS
CURRICULUM REFERENCE TEST JUNE 1986 AVERAGE SCORE REPORT
SCIENCE LEVEL 2

TECR101D02

SCHOOL CODE	SCHOOL NAME	// //	SCIENCE (OUT OF 25 ITEMS)
4690	MATTAHUNT ELEMENTARY	/	19
4070	CHITTICK ELEMENTARY	/	23
4080	CONLEY ELEMENTARY	/	15
4151	TAYLOR ELEMENTARY	/	21
4192	F ROOSEVELT ELEMENTARY	/	20
4200	GREW ELEMENTARY	/	22
4201	CHANNING ELEMENTARY	/	20
4670	P A SHAW ELEMENTARY	/	21
DISB		/	21
4051	DICKERMAN ELEMENTARY	/	21
4130	S GREENWOOD ELEMENTARY	/	19
4131	ENDICOTT ELEMENTARY	/	21
4140	EVERETT ELEMENTARY	/	18
4150	FIFIELD ELEMENTARY	/	20
4250	HOLLAND ELEMENTARY	/	21
4340	MARSHALL ELEMENTARY	/	22
4350	MATHER ELEMENTARY	/	21
4390	KENNY ELEMENTARY	/	22
4391	OHEARN ELEMENTARY	/	20
4400	MURPHY ELEMENTARY	/	21
4550	STONE ELEMENTARY	/	22
4022	PERKINS ELEMENTARY	/	20
4052	WINTHROP ELEMENTARY	/	23
4100	DEVER ELEMENTARY	/	20

BOSTON PUBLIC SCHOOLS
CURRICULUM REFERENCE TEST JUNE 1986 AVERAGE SCORE REPORT
SCIENCE LEVEL 2

SCHOOL CODE	SCHOOL NAME	// //	SCIENCE (OUT OF 25 ITEMS)
4160	GARDNER ELEMENTARY	/	20
4170	GARFIELD ELEMENTARY	/	21
4173	WINSHIP ELEMENTARY	/	19
4220	HAMILTON ELEMENTARY	/	21
4221	BALDWIN ELEMENTARY	/	19
4570	TOBIN ELEMENTARY	/	20
4571	FARRAGUT ELEMENTARY	/	22
4010	AGASSIZ ELEMENTARY	/	21
4240	ELLIS ELEMENTARY	/	21
4241	HIGGINSON ELEMENTARY	/	21
4270	J KENNEDY ELEMENTARY	/	22
4310	LONGFELLOW ELEMENTARY	/	20
4311	MANNING ELEMENTARY	/	21
4370	MENDELL ELEMENTARY	/	21
4371	FULLER ELEMENTARY	/	21
4430	PARKMAN ELEMENTARY	/	22
DISA		/	21
4030	BEETHOVEN ELEMENTARY	/	19
4031	KILMER ELEMENTARY	/	21
4081	BATES ELEMENTARY	/	22
4082	MOZART ELEMENTARY	/	22
4290	LEE ELEMENTARY	/	23
4560	SUMNER ELEMENTARY	/	21
4561	PHILBRICK ELEMENTARY	/	20

12/29/86

BOSTON PUBLIC SCHOOLS
CURRICULUM REFERENCE TEST JUNE 1986 AVERAGE SCORE REPORT
SCIENCE LEVEL 2

SCHOOL CODE	SCHOOL NAME	// //	SCIENCE (OUT OF 25 ITEMS)
4120	EMERSON ELEMENTARY	/	22
4121	MASON ELEMENTARY	/	20
4530	RUSSELL ELEMENTARY	/	20
4531	CLAP ELEMENTARY	/	23
4590	TYNAN ELEMENTARY	/	23
4592	PERRY ELEMENTARY	/	23
4630	CONDON ELEMENTARY	/	21
DISC		/	21
4280	KENT ELEMENTARY	/	20
4283	WPRESCOTT ELEMENTARY	/	22
4381	ELIOT ELEMENTARY	/	21
4640	BLACKSTONE ELEMENTARY	/	20
4650	QUINCY ELEMENTARY	/	21
4062	BRADLEY ELEMENTARY	/	22
4321	ALIGHIERI ELEMENTARY	/	20
4322	OTIS ELEMENTARY	/	21
4361	ADAMS ELEMENTARY	/	22
4541	P KENNEDY ELEMENTARY	/	23
4543	ODONNELL ELEMENTARY	/	21
DISD		/	21
4053	HERNANDEZ ELEMENTARY	/	21
4061	GUILD ELEMENTARY	/	20
4113	HALE ELEMENTARY	/	20
4210	HALEY ELEMENTARY	/	21

12/29/86

TCCR101D02

BOSTON PUBLIC SCHOOLS
CURRICULUM REFERENCE TEST JUNE 1986 AVERAGE SCORE REPORT
SCIENCE LEVEL 2

SCHOOL CODE	SCHOOL NAME	//	SCIENCE (OUT OF 25 ITEMS)
4230	HENNIGAN ELEMENTARY	/	22
4271	CURLEY ELEMENTARY	/	21
4360	MCKAY ELEMENTARY	/	22
4410	OHRENBERGER ELEMENTARY	/	21
4580	TROTTER ELEMENTARY	/	20
4610	HORACE MANN SCHOOL	/	
4620	JACKSON MANN ELEMENTARY	/	19
DISE		/	21
DISA		/	21
DISB		/	21
DISC		/	21
DISD		/	21
DISF		/	21
STOT	SYSTEM WIDE TOTAL	/	21

SCIENCE - LEVEL 3

INSTRUMENT AND POPULATION DESCRIPTION

This is a forty-item multiple choice test measuring selected circled objectives in the curriculum strands of Skills/Processes (5 items), Science/Society (1 item), Life Sciences (15 items), Human Biology/Health (5 items), Physical Science (7 items), Earth Science (3 items), and Astronomy (4 items).

The population includes all students enrolled in grade 3 who took an on-level test and for whom valid answer sheets were submitted.

SYSTEM STRENGTHS AND WEAKNESSES

Overall, students performed fairly well on this test with a system-wide average score of 70%. Generally, students seem to be mastering the objectives in the domains of Skills/Processes, Science/Society, and Astronomy and most of the objectives in Life Sciences and Human Biology/Health. However, within these latter two domains there are isolated objectives which are not being mastered by more than fifty percent of the students. Within Life Sciences students had difficulty describing the stages in the life cycles of plants (item # 12) and in Human Biology/Health the difficulty was in determining the function of the digestive, repiratory, and the circulatory systems of the human body (item # 24).

In Physical Science and in Earth Science there were two items in each that fewer than fifty percent of the students answered correctly. In Physical Science both items had to do with magnetism and the north and south poles (item #'s 30 and 33). In Earth Science one item addressed the stages of the water cycle (item # 34) and the other addressed geology (item # 36).

BOSTON PUBLIC SCHOOLS

DEPARTMENT OF EDUCATIONAL TESTING

CURRICULUM REFERENCED FINAL SCIENCE - LEVEL 3

1985 - 1986

B.6	Measure temperature in degrees Fahrenheit (Correlate w/Math Objs.)	1	
B.3	Measure length to the nearest half inch (Correlate w/Math Objs.)	2	
B.5	Measure time to the nearest minute (Correlate w/Math Objs.)	3	
B.2	Identify the appropriate measuring tool & measure unit for a task	4	
B.10	Record info. in the form of sketches, picutre & bar graphs, etc.	5	
C.4	Name several important scientific inventors & their contributions	6	
D.7	Classify animals according to certain criteria	7	
D.1	Three essential characters of living things: breath, eat, reproduce	8	
D.11	Given animal; how it moves, communicates, & how its young are born	9	
D.1	Three essential characters of living things: breath, eat, reproduce	10	
D.2	Group plants into major types & describe characters of each group	11	
D.5	Describe the stages in the life cycle of plants	12	
D.15	Animals breathe oxygen, breathe out carbon dixode; plants do oppos.	13	
D.7	Classify animals according to certain criteria	14	
D.5	Describe the stages in the life cycle of plants	15	
D.17	Fossils as evidence of plants & animals that are now extinct	16	
D.9	Animals that lay eggs & those that bear their young w/o eggs	17	
D.16	Different environments limits no. of plants & animals who survive	18	
D.14	Describe a simple food chain	19	
D.12	Difference between domestic animals and wild animals	20	
D.16	Different environments limits no. of plants & animals who survive	21	
E.4	Describe some difference between people at diff. life stages	22	
E.1	Skeleton & muscles hold our bodies upright & move them around	23	
E.3	Function of 3 systems in body: digestion, respiration, circulation	24	
E.5	Timing of emergence of baby teeth & of permanent teeth	25	
E.7	Difference between traits you inherit & those we develop	26	
F.1	Examples of three forms of matter: solid, liquid & gas	27	
F.2	Different forms water can take: liquid, solid & gas	28	
F.5	Way things expand when they are heated or cooled	29	
F.11	Magnets are strongest at poles & 2 poles are labeled north & south	30	
F.10	Objects to which magnets do and do not stick	31	
F.6	Sun is a major source of energy on Earth	32	
F.12	2 north/south poles repel, 2 different poles attract	33	
G.4	Explain the stages of the water cycle	34	
G.1	When air is heated it expands & rises, when cooled, contracts&sinks	35	
G.12	Rocks are broken up into sand & dirt, mixed w/organic matter-soil	36	
H.2	Sketch solar system, show 9 plantes & their orbits show Sun & Earth	37	
H.1	How distance effects the size of stars and planets	38	
H.5	Rotation of Earth on its axis & orbit of Earth around the sun	39	
H.4	The moon and other planets shine only w/sunlight reflect on surface	40	

```
 933 SCI LEVL 3          TLCR5005            11/07/86
PERCENTAGE OF CORRECT ANSWERS PER ITEM
NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY **

SCHL    1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 TOTAL

 4160  54 81 97 94 ** 91 72 91 97 81 94 70 51 91 86 91 83 97 70 94 ** 70 ** 51 89 72 72 56 67 35 91 91 45 40 64 81 64 56 48 91 77
 4170  47 78 95 95 ** 56 86 95 95 91 95 65 69 95 82 86 78 95 39 86 95 52 ** 26 78 65 52 47 60 52 95 91 82 56 56  4 69 73 86 82 74
 4173  55 80 95 90 ** 70 95 90 95 95 90 25 50 70 95 95 70 90 45 80 ** 90 95 45 80 55 50 35 70 30 95 95 55 30 70 20 80 55 30 90 71
 4220  88 ** 96 96 ** 88 84 80 96 92 96 69 57 76 69 80 84 88 42 92 96 84 ** 19 61 53 42 65 76 57 96 80 50 73 38 23 69 46 50 69 73
 4221  95 87 91 91 95 87 79 87 ** 91 95 79 45 95 70 91 79 83 41 83 ** 66 95 29 83 75 45 29 79 20 79 95 70 29 62 16 29 66 91 87 73
 4570  64 79 92 92 97 84 69 97 94 87 89 33 43 76 66 74 74 94 61 87 92 64 97 56 71 66 43 48 25 41 82 89 56 35 92 25 89 71 48 84 71
 4571  56 68 96 87 96 71 84 90 93 93 93 43 71 93 81 78 68 90 43 90 93 53 93 53 59 71 84 59 68 56 90 90 90 56 65 28 78 84 34 90 75
 4010  77 96 98 86 ** 83 83 83 94 90 90 77 47 88 66 77 60 88 83 84 92 56 90 47 69 43 45 52 49 33 71 77 47 62 69 50 64 56 64 83 72
 4240  60 77 90 75 92 60 70 77 95 80 82 27 55 75 47 85 70 82 20 77 87 52 92 40 67 47 52 20 45 25 80 65 42 12 70 32 60 37 35 75 61
 4241  60 95 86 95 95 95 91 ** 95 ** 95 86 95 86 95 95 91 95 95 91 ** 73 ** 73 73 91 86 65 56 47 91 91 39 78 73 56 52 47 73 91 82
 4270  75 90 93 78 ** 63 78 90 96 96 ** 60 66 90 81 87 72 90 51 93 ** 72 93 57 66 57 60 45 57 57 90 90 42 54 54 30 69 72 60 78 74
 4310  65 89 86 93 ** 72 75 82 89 93 ** 37 65 79 79 65 72 89 51 ** ** 48 ** 44 86 62 48 75 51 31 96 82 44 31 72 48 55 58 72 75 71
 4311  70 79 83 87 95 41 91 87 ** 83 87 50 58 87 79 87 79 83 62 95 ** 62 91 50 79 75 45 66 66 50 95 91 70 45 58 45 70 41 66 95 74
 4370  53 78 87 90 96 71 68 84 ** 81 96 40 62 93 59 62 81 87 43 90 87 68 90 56 81 62 50 56 56 53 81 78 59 46 75 68 12 75 75 81 71
 4371  89 87 95 93 ** 89 92 ** ** 92 98 39 89 90 89 85 89 95 60 98 96 81 98 40 93 75 46 81 37 25 90 93 75 64 78 14 78 65 60 85 78
 4430  ** 90 ** 93 93 93 83 87 96 93 ** 41 83 83 93 80 90 90 74 87 96 87 90 74 93 77 87 90 35 35 80 80 38 87 93 61 45 45 64 87 80
 DISA  70 85 93 89 97 77 81 89 96 89 94 52 63 86 76 82 77 90 56 90 95 67 95 47 77 64 56 57 53 39 86 86 56 50 70 38 63 60 59 84 73

 4330  36 68 89 78 ** 89 73 89 89 78 94 31 36 73 78 57 63 89 52 ** ** 36 89 10 84 63 42 52 68 15 94 68 42 21 31  0 10 26 31 73 60
 4031  40 68 ** 63 ** 50 54 72 ** 86 95 18 27 77 50 59 40 77 45 81 81 40 81 31 63 36 27 45 63 18 81 77 13 18 72 22 18 50 54 72 57
 4081  54 84 ** 90 ** 81 84 96 96 96 96 60 78 81 90 69 81 84 81 90 ** 81 ** 57 78 72 51 72 72 51 87 87 66 60 63 48 90 57 60 84 78
 4082  61 47 95 90 95 95 ** 90 90 95 **  9 85 90 61 61 71 90 71 90 ** ** ** 38 80 66 90 52 80  4 95 80 33 33 52 19 19 28  0 90 69
 4290  51 68 86 84 95 55 77 73 ** 82 91 26 33 73 75 51 66 82 48 91 ** 51 ** 22 93 44 64 66 51 26 84 71 22 37 42  8 46 40 28 84 62
 4560  59 77 91 94 98 87 89 92 91 92 94 56 64 87 87 89 82 94 64 91 96 80 94 63 92 85 68 61 75 56 92 78 75 57 59 12 64 50 80 87 78
 4561  87 87 95 91 ** 70 87 95 91 87 95 50 58 83 79 54 83 87 62 87 95 75 87 66 87 70 41 62 58 12 83 75 29 41 70 25 50 54 66 83 71
 4690  50 73 79 86 89 58 77 81 91 87 96 17 46 77 72 66 82 77 39 75 93 70 91 58 80 58 38 53 40 31 90 87 34 55 61 22 36 30 33 80 64
 4070  83 94 92 89 98 83 90 81 92 87 96 78 78 92 98 83 90 98 61 96 98 72 94 67 85 78 80 76 72 49 85 87 65 43 78 65 27 72 78 80 80
 4080  84 92 96 76 ** 64 96 96 92 ** 92 56 76 76 76 76 80 96 72 ** 96 84 96 52 88 88 72 80 72 60 96 92 80 48 84 32 88 52 72 92 80
 4151  47 63 95 93 95 93 95 97 97 94 95 63 52 93 87 80 88 93 59 88 95 69 93 61 87 66 62 75 66 50 84 90 65 61 76 52 58 77 75 86 78
 4190  72 71 89 76 91 84 71 83 96 81 91 62 77 76 76 88 81 91 69 93 93 71 86 64 86 72 54 52 66 42 77 86 79 55 67 64 66 64 76 88 76
 4192  75 79 93 82 93 62 89 93 ** 96 96 34 55 93 82 82 37 69 13 86 96 44 96 51 82 51 44 75 41 27 75 ** 34 48 65 58 51 68 37 75 69
 4200  43 69 ** 69 ** 65 91 91 95 86 ** 13 34 65 78 73 73 ** 39 ** ** 65 ** 39 82 78 34 47 34 39 86 95 73 60 56  8 30 21 47 73 66
 4201  60 77 87 97 97 85 80 92 92 97 92 32 70 70 70 55 72 80 42 92 92 57 85 55 65 80 60 50 40 27 87 72 40 45 62 25 37 37 32 72 66
 4670  73 94 94 78 ** 84 68 73 ** ** 84 36 68 73 78 84 57 87 57 78 89 47 ** 42 78 57 57 89 26 36 ** 89 73 31 63 47 36 63 47 63 70
 DISB  60 75 91 85 96 76 83 87 94 90 94 43 59 81 79 72 76 88 55 89 95 67 93 53 83 67 56 63 58 37 87 84 53 48 64 34 48 51 55 81 71

 4351  69 80 82 82 93 41 76 80 97 82 91 17 45 95 67 78 58 82 30 86 95 36 62 63 69 47 30 41 41 23 73 47 23 50 76 54 34 76 54 86 63
 4130  80 82 93 82 97 84 82 93 ** 93 93 51 62 93 71 77 77 80 35 91 97 71 93 42 88 68 53 62 53 42 84 80 48 53 71 22 55 51 64 77 72
 4131  70 76 86 90 96 53 96 90 96 76 86 10 46 63 76 76 60 73 16 80 96 43 93 36 76 50 23 50 40 26 86 66 56 56 30 23 43 30 36 86 61
 4140  73 ** ** 96 96 80 88 92 ** 84 92 38 53 69 80 61 80 88 53 84 96 73 96 57 80 61 50 38 65 61 84 76 50 53 80 34 46 38 73 73 72
 4150  33 61 82 71 94 47 66 73 89 78 82 14 59 64 66 71 56 75 33 82 85 45 82 49 66 35 38 24 42 36 75 73 45 31 45  8 43 31 31 64 56
 4250  46 70 96 80 93 64 72 89 76 88 91 44 59 79 71 55 78 85 47 85 94 56 93 48 77 60 43 52 59 46 86 72 44 44 70 37 50 57 61 79 68
 4340  55 75 87 87 95 55 78 78 92 90 95 40 75 71 61 59 74 78 29 81 94 72 88 30 74 50 73 62 40 49 85 84 72 49 46 16 48 50 56 81 67
 4350  57 65 93 76 94 38 54 73 93 89 94 26 57 68 67 52 71 76 35 78 93 38 84 24 69 32 36 39 49 27 80 72 26 30 52 19 26 46 46 86 58
 4390  50 79 95 87 ** 95 75 95 91 83 95 37 70 91 70 70 58 91 58 87 ** 58 95 37 87 62 12 50 50 50 87 66 25 62 70 54 75 54 50 87 70
 4391  41 50 95 79 ** 45 66 91 91 87 91 37 62 75 95 79 70 95 70 87 ** 79 ** 66 91 45 54 45 33  4 83 ** 20 50 87 16 45 45 29 95 67
 4400  25 72 86 70 96 60 82 92 94 92 98 35 43 74 54 62 64 90 21 88 ** 52 96 52 78 35 47 52 66 47 90 72 35 41 52 33 39 52 78 72 65
 4550  88 96 ** ** 96 92 92 84 ** 84 96 60 80 92 88 72 80 80 64 88 92 92 96 84 88 84 56 44 64 24 84 72 24 36 52 16 56 40 56 96 74
 4022  68 90 90 95 ** 95 77 ** 90 86 90 90 18 95 77 45 95 ** 81 90 95 86 95 50 81 63 18 68 54  9 77 77 54 36 54 36 59 63 63 90 72
```

```
933 SCI LEVL 3         TECR5005              11/07/86
PERCENTAGE OF CORRECT ANSWERS PER ITEM
NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY **

SCHL     1   2   3   4   5   6   7   8   9  10  11  12  13  14  15  16  17  18  19  20  21  22  23  24  25  26  27  28  29  30  31  32  33  34  35  36  37  38  39  40 TOTAL

4052    40  90  90  **  **  90  90  85  95  95  95  60  20  85  75  **  80  90  85  85  95  85  90  80  95  65  50  85  35  40  85  95  20  65  85   5  30  45  20  90  72
4100    62  83  93  95  **  83  90  93  97  90  90  79  67  90  72  65  97  95  58  79  95  81  93  18  97  58  55  46  51  44  83  90  67  72  58  76  65  48  60  86  75
4120    57  95  95  71  **  95  90  **  95  95  95  71  80  85  90  85  61  **  95  85  **  33  **  47  90  **  85  71  33  90  95  **  85  76  90  85  95  95  85  85  84
4121    38  88  94  88  **  **  94  94  94  **  **   5  83  88  88  44  77  83  27  88  94  61  **  27  94  77  22  55  66  27  83  88  22  11  44   5  16  16  38  83  65
4530    70  75  95  76  95  55  55  84  89  80  90  36  40  70  56  75  61  80  40  75  90  44  92  35  78  30  43  38  33  23  81  81  41  38  44  12  55  58  58  73  61
4531    95  **  95  **  **  90  85  65  **  95  95  70  60  75  80  80  75  90  50  90  95  80  95  50  **  65  75  90  90  45  **  85  70  75  70  50  75  75  70  90  80
4590    71  76  88  69  86  66  74  84  89  81  84  47  50  72  71  62  69  71  50  81  96  52  88  35  67  52  44  47  32  27  83  64  23  50  59  33  59  44  57  72  63
4592    81  90  90  81  **  **  90  90  **  **  **   0  18  **  **  90  **  **  45  **  **  63  **  27  **  81  **  90  72   9  90  81  90  81  90   0  54   0  36  90  76
4630    70  91  98  81  97  85  79  90  95  94  98  51  64  77  78  82  78  91  64  93  98  70  **  40  93  59  64  52  63  51  91  81  55  55  77  58  68  47  86  85  76
DISC    59  78  91  82  95  66  76  85  94  87  92  41  57  78  71  67  72  84  45  84  95  59  92  42  80  53  49  51  49  38  84  76  45  48  60  31  50  50  57  81  67

4260    59  81  89  75  94  75  78  89  94  83  **  43  21  72  67  64  81  86  54  89  97  64  97  59  94  51  45  35  45  40  91  75  37  35  51  40  54  70  54  81  68
4280    77  87  90  87  96  83  87  93  96  96  96  61  74  77  83  74  87  93  64  96  **  67  **  83  87  77  64  80  67   9  **  90  48  38  67   6  87  64  25  93  76
4283    66  89  93  81  98  72  84  86  94  83  93  35  62  84  79  74  84  88  52  88  94  61  93  38  84  42  44  40  37  25  77  74  37  35  42   6  44  54  40  83  66
4381    75  86  91  80  97  72  77  86  94  88  97  63  75  83  86  77  88  88  47  86  94  55  91  36  83  63  55  61  38  36  86  55  69  25  41  19  22  22  58  77  68
4640    61  82  88  90  99  72  83  80  94  81  87  61  55  76  69  64  80  86  56  84  93  66  86  53  75  54  49  54  44  36  77  83  49  65  58  66  54  51  58  80  70
4650    47  86  86  71  75  50  63  76  95  78  89  47  82  78  73  60  71  76  60  89  89  50  89  41  54  47  41  34  56  34  84  76  45  43  52  23  58  58  54  73  64
4062    88  96  **  96  **  85  **  96  **  92  96  96  59  96  77  88  81  **  88  88  96  92  92  96  92  88  92  66  85  66  96  85  96  **  **  92  81  96  92  96  90
4321    75  87  84  90  96  72  84  93  **  90  96  27  66  84  72  57  54  87  36  90  96  54  **  30  81  57  27  39  60  15  81  72  21  12  39  15  21  45  36  87  63
4322    58  76  96  76  **  56  68  78  94  88  94  43  39  92  72  62  68  84  33  96  94  47  90  33  72  52  39  58  50  21  74  82  31  35  43   9  60  47  52  86  64
4361    66  85  **  80  **  80  61  95  90  95  90  14  61  76  80  57  47  90  28  **  **  38  95  19  66  23  14  52  42  23  95  **  19  38  61  14  76  66  52  80  64
4541    52  79  97  76  97  55  73  85  97  85  **  26  73  79  85  61  64  94  35  85  97  44  **  61  88  55  52  58  38  17  88  76  23  20  47   5  32  38  50  82  64
4543    45  72  77  75  97  22  75  81  86  93  90  29  47  84  65  45  45  81  54  84  97  56  90  15  68  59  29  40  22  15  79  75  27  36  34  13  15  40  43  79  57
DISD    62  83  90  82  97  65  78  85  94  86  93  47  58  81  75  65  73  87  51  88  95  58  92  46  78  55  46  50  47  29  83  78  42  42  51  29  49  52  51  82  67

4053    25  81  93  75  96  59  40  81  93  93  **  40  40  75  53  50  59  81  40  84  **  40  96  40  78  28  75  75  53   9  96  78  18  40  46  15  21  68  50  87  62
4061    **  80  **  **  **  71  **  95  **  95  **  42  42  85  90  85  57  **  85  95  **  85  **  47  90  52  71  42  33  52  80  85  28  33  47   4  76  42  80  90  74
4113    35  60  85  95  95  85  80  80  90  90  95  80  60  85  45  75  95  90  85  90  95  80  90  30  75  70  40  75  80  55  90  80  65  65  55  60  50  80  70  90  74
4210    61  80  **  85  97  83  73  85  95  **  **  69  59  88  85  92  80  95  64  92  97  76  **  50  83  73  61  83  45  78  97  95  85  54  83   2  95  57  54  69  78
4230    38  60  90  71  93  55  83  75  90  76  91  38  68  80  56  61  73  73  28  83  88  51  78  23  70  41  36  41  46  21  68  75  31  36  53  40  46  46  35  78  60
4271    82  94  97  82  97  87  92  **  **  92  97  74  74  89  82  89  66  89  61  94  **  79  **  69  79  66  46  82  48  74  92  97  51  69  76  58  89  74  84  94  82
4360    89  94  82  87  97  92  94  92  97  94  97  84  28  94  89  74  76  92  51  97  **  84  **  43  87  89  84  89  71  64  89  **  20  82  82  46  94  89  92  94  82
4410    71  93  96  80  **  82  93  90  95  90  95  60  82  92  87  87  80  90  71  95  **  65  98  38  82  71  57  63  57  44  88  88  69  66  73  71  80  77  58  80  79
4580    51  78  95  79  98  52  71  84  96  89  95  36  51  72  78  71  70  91  44  96  97  54  88  33  73  46  46  57  47  27  90  82  32  40  64  17  78  48  42  76  66
4620    53  80  94  78  94  55  71  85  91  84  89  43  55  80  73  55  67  82  51  84  96  63  90  42  74  46  54  51  55  59  81  84  67  48  62  41  56  59  44  72  68
DISE    58  80  93  81  96  68  78  86  94  89  94  53  58  83  75  72  72  87  53  90  97  64  92  40  77  56  55  62  53  46  86  86  48  52  65  37  69  62  55  80  71

DISA    70  85  93  89  97  77  81  89  96  89  94  52  63  86  76  82  77  90  56  90  95  67  95  47  77  64  56  57  53  39  86  86  56  50  70  38  63  60  59  84  73
DISB    60  75  91  85  96  76  83  87  94  90  94  43  59  81  79  72  76  88  55  89  95  67  93  53  83  67  56  63  58  37  87  84  53  48  64  34  48  51  55  81  71
DISC    59  78  91  82  95  66  76  85  94  87  92  41  57  78  71  67  72  84  45  84  95  59  92  42  80  53  49  51  49  38  84  76  45  48  60  31  50  50  57  81  67
DISD    62  83  90  82  97  65  78  85  94  86  93  47  58  81  75  65  73  87  51  88  95  58  92  46  78  55  46  50  47  29  83  78  42  42  51  29  49  52  51  82  67
DISE    58  80  93  81  96  68  78  86  94  89  94  53  58  83  75  72  72  87  53  90  97  64  92  40  77  56  55  62  53  46  86  86  48  52  65  37  69  62  55  80  71
STOT    62  80  92  84  96  70  79  86  94  88  93  46  59  81  75  71  74  87  51  88  95  63  93  45  79  58  52  56  52  38  85  81  49  48  62  33  55  54  56  82  70
```

SCIENCE - LEVEL 4

INSTRUMENT AND POPULATION DESCRIPTION

This is a forty-item multiple choice test measuring selected circled objectives in the curriculum strands of Skills/Processes (6 items), Life Sciences (14 items), Human Biology/Health (3 (3 items), Physical Science (4 items), Earth Science (4 items), and Astronomy (9 items).

The population includes all students enrolled in grade 4 who took an on-level test and for whom valid answer sheets were submitted.

SYSTEM STRENGTHS AND WEAKNESSES

Overall, students performed only fairly well on this test with a system-wide average score of 67%. Generally, students seem to be mastering the objectives in the domains of Skills/Processes, Human Biology/Health, Physical Science, and Earth Science, and most of the objectives in Astronomy. In this latter domain there is one item which fewer than fifty percent of the students answered correctly (item # 35); this item tapped knowledge of the sun's relative size in the solar system.

The most severe deficits as a strand lie in the domain of Life Sciences where of fourteen items there are four that fewer than fifty percent of the students answered correctly (items #'s 17, 19, 20, and 22). The objectives measured by these items are grouping plants into major types, recognizing that fruit develops from the flowers of plants, recognizing the parts of a flower in a drawing, and naming the ways that seeds are spread around.

BOSTON PUBLIC SCHOOLS

DEPARTMENT OF EDUCATIONAL TESTING

CURRICULUM REFERENCED FINAL SCIENCE - LEVEL 4

1985 - 1986

B.4	Measure objects or lengths to nearest quarter inch or millimeter	1	
B.3	Identify appropriate measuring instrument & unit of measmt for task	2	
B.1	Observing carefully; notice size, shape, color, texture, etc.	3	
B.7	Measure temperature in degrees Fahrenheit (Correlate w/Math Objs.)	4	
B.9	Make estimates of length, weight, temperature & time	5	
B.3	Identify appropriate measuring instrument & unit of measmt for task	6	
G.15	Describe fossils found in certain rocks and what they indicate	7	
G.16	Describe the work of geologists	8	
G.3	Equator; zones around it and the effect on weather	9	
G.4	Three stages of water cycle: evaporation, forms of clouds, precipt.	10	
F.21	Earth's gravity and Sir Isaac Newton	11	
F.12	Identify objects to which magnets will stick	12	
F.17	Electricity will only flow in a closed circuit w/a source of power	13	
F.1	Identify the three stages of matter & give examples	14	
D.3	Recognize parts of a flower in a drawing; functions of each part	15	
D.1	Difference between things living & non-living, list traits	16	
D.2	Group plants into major types & list characters of each group	17	
D.3	Recognize parts of a flower in a drawing; functions of each part	18	
D.4	Recognize that fruit develops from the flowers of plants	19	
D.3	Recognize parts of a flower in a drawing; functions of each part	20	
D.11	Classify animals as vertebrates & invertebrates; main characters	21	
D.8	Names the ways that seeds are spread around	22	
D.16	Identify the ways of telling the age of certain living things	23	
D.13	Identify some adaptations advantageous to predators	24	
D.12	Classify animals according to the environment where they live	25	
D.5	Green plants produce starch and what they take in to produce it	26	
D.14	Life cycles of an insect, fish, amphibian, bird or mammal	27	
D.17	Migration, hibernation & dormancy as survival response to winter	28	
E.5	Distinguish between instinctive behavior & learned behavior	29	
E.2	Trace route taken by a piece of food in digestive system	30	
E.6	Essential conditions for survival & growth; food, water, rest, etc.	31	
H.2	Distinguish sun & other stars from planets & other satellites	32	
H.1	Nine known planets vary in size & circle the sun at different	33	
H.1	distances, held in orbit by sun's gravity & Earth is 3rd frm sun	34	
H.5	Sun is an average-size star in Milky Way ; has many millions	35	
H.14	Sun is less warmer in winter because of angle of sun	36	
H.12	Daylight hours longer til 6/21 & shorter til 12/21	37	
H.6	Identify constellations as groups of stars that have distinct shape	38	
H.4	Copernicus's theory that the earth moves around the sun	39	
H.7	Describe how to locate the North Star on a clear night	40	

```
 943 SCI LEVL 4          TECR5005              11/07/86
PERCENTAGE OF CORRECT ANSWERS PER ITEM
NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY **

SCHL    1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 TOTAL

 4352  65 69 86 95 60 47 65 56 86 73 82 86 91 86 65 91 26 39 69  8 86 34 60 78 95 60 56 52 86 60 86 78 82 65 34 91 82 34 52 47 67
 4100  69 77 97 98 63 58 90 69 89 81 93 97 79 84 83 ** 53 75 55 46 76 48 73 93 95 82 69 61 84 79 84 77 84 70 52 84 82 59 81 58 76
 4120  55 85 ** ** 60 90 95 75 85 90 95 ** 90 95 90 95 80 80 80 10 95 45 75 80 95 35 80 70 ** 65 ** 70 85 95 40 95 90 50 60 55 78
 4121  45  9 ** 90 63 36 ** 63 72 81 ** ** 90 90 ** ** 81 90 18 63 72 54 81 ** ** 90 ** 45 72 81 81 90 81 90 81 90 90 45 90 72 77
 4530  41 51 89 96 37 44 72 27 41 58 68 86 58 44 24 ** 20 37 13 13 55 20 58 82 75 27 44 37 62 68 44 55 65 27 24 68 79 31 48 37 51
 4531  54 45 81 ** 18 90 90 90 72 81 81 ** 54 90 ** ** 27 81 54 72 81 90 45 81 ** 45 72 72 72 ** 45 ** 72 ** 81 81 72 45 81 27 74
 4590  31 40 91 ** 51 77 68 71 77 68 68 ** 60 62 85 97 37 71 34 54 80 25 82 85 94 48 22 28 91 54 62 48 71 60 28 88 77 40 48 34 63
 4592  62 50 ** ** 37 75 87 ** 87 87 87 ** 25 87 87 ** 75 62 37 50 75 37 75 75 75 62 50 25 ** 62 62 87 87 62 25 87 87 62 ** 62 71
 4630  50 71 94 98 38 87 75 71 71 70 84 94 78 85 80 ** 43 60 50 47 82 54 92 66 87 50 64 42 87 73 80 85 78 85 54 89 85 71 63 59 73
 DISC  52 52 93 96 54 62 82 65 71 71 82 92 72 72 65 97 47 57 34 34 73 39 65 79 90 52 50 49 83 69 77 70 69 66 45 84 79 47 64 55 66

 4260  12 69 90 96 51 54 93 84 78 57 75 87 72 60 78 ** 45 60 36 30 63 54 57 78 84 69 39 33 75 72 69 72 75 75 57 81 75 51 57 48 65
 4280  77 80 91 94 66 47 77 72 66 72 86 88 86 77 86 91 80 75 50 63 94 61 77 83 88 75 55 83 86 91 80 72 61 69 58 91 83 72 69 61 76
 4283  38 68 90 95 61 61 75 61 77 55 66 91 63 55 62 95 48 56 30 37 76 41 47 73 91 47 38 50 81 56 84 65 56 72 58 93 83 48 58 62 64
 4381  ** 76 ** 95 47 42 90 85 76 76 90 95 95 90 90 95 42 90 52 28 85 19 33 71 95 57 52 47 90 66 71 80 47 85 52 95 85 66 71 52 72
 4643  39 47 86 95 38 41 66 48 45 67 84 84 75 71 57 95 38 43 22 25 61 30 40 68 84 48 51 34 72 43 65 63 70 67 46 75 62 40 62 36 57
 4650  69 47 95 95 56 63 87 63 76 76 83 88 74 68 51 92 32 51 44 30 70 60 58 77 95 47 41 45 77 72 81 77 58 88 55 81 87 56 67 57 67
 4062  96 90 96 96 84 81 90 96 96 96 96 ** 90 87 78 ** 81 84 78 78 87 87 90 90 ** 90 81 71 93 87 93 90 62 93 84 84 93 90 84 78 88
 4321  39 39 85 92 39 50 71 32 75 89 82 92 89 75 64 96 32 50 10  3 78 25 57 71 96 17 42 25 75 50 57 50 50 46 35 82 71 28 67 35 56
 4322  43 37 89 98 50 37 53 50 65 50 72 86 68 81 65 96 41 68 44 34 60 24 56 72 93 41 39 22 62 60 77 87 55 68 41 75 72 43 56 41 59
 4361  60 33 ** ** 53 40 93 80 93 86 86 ** 80 86 ** ** 46 93 20 60 93 46 93 80 ** ** 40 86 93 60 80 ** 66 ** 86 80 60 ** 60 80 78
 4541  37 10 95 97 32 52 82 57 65 50 77 95 55 50 42 97 32 40 10 10 60 22 40 80 90 52 37 45 75 72 55 65 62 60 27 72 82 32 55 50 56
 4543  39 50 92 ** 52 71 86 63 68 60 92 94 65 63 50 94 28 52 42 15 78 28 76 86 97 86 39 50 84 76 76 60 71 81 68 84 78 23 57 39 65
 DISD  51 52 91 96 51 53 77 62 69 67 81 90 73 69 63 95 43 58 35 32 72 41 56 76 91 55 45 45 78 64 74 73 62 74 53 82 77 50 63 51 65

 4353  45 25 91 94 45 51 77 54 68 68 74 91 74 74 54 94 37 51 48 17 77 37 62 80 82 40 28 31 82 54 71 77 71 71 37 74 57 45 48 40 60
 4061  68 42 93 97 60 71 91 55 91 84 55 97 91 75 91 ** 57 71 44 33 86 66 86 95 97 73 48 82 93 88 88 95 84 82 53 88 95 75 77 62 78
 4113  58 44 94 97 32 67 73 47 67 85 91 94 76 67 50 97 55 64 52 38 85 29 35 82 94 38 29 61 82 64 82 76 70 67 47 79 82 38 41 70 65
 4210  52 36 ** 93 45 54 88 52 72 79 84 93 81 93 68 97 45 59 22 13 93 45 81 97 86 52 45 75 88 88 93 75 52 59 43 88 72 45 45 54 67
 4230  59 40 94 96 59 70 86 69 68 73 83 98 72 73 62 ** 45 54 36 34 82 39 76 87 93 67 57 55 86 81 84 75 65 68 54 84 75 65 64 64 70
 4271  36 47 97 ** 52 56 90 70 56 77 88 ** 86 84 84 ** 56 70 59 29 95 68 72 68 97 84 43 56 95 59 86 93 68 75 45 81 86 72 65 52 72
 4360  86 81 91 97 70 89 86 91 91 83 ** 91 89 78 86 94 54 94 78 78 91 72 91 89 83 86 86 75 94 83 91 83 94 78 67 94 89 86 89 86 85
 4410  52 61 98 ** 44 66 76 74 79 86 94 98 83 86 76 ** 62 61 40 49 89 55 66 91 94 57 79 54 96 84 84 94 76 86 47 89 77 67 83 57 75
 4580  58 56 95 ** 55 59 78 50 79 81 82 90 77 60 76 97 39 60 40 40 76 42 67 89 85 59 43 47 83 81 84 79 60 75 52 83 71 53 72 40 68
 4620  35 48 92 95 42 47 70 49 64 65 68 82 61 52 75 90 29 61 46 28 59 30 55 71 86 65 54 39 76 69 72 61 44 77 38 82 70 49 53 54 60
 DISE  54 48 94 97 51 62 81 60 73 77 84 93 76 71 72 97 45 62 44 35 81 45 69 84 90 63 53 55 86 77 83 79 65 74 48 84 76 59 64 57 69

 DISA  64 55 94 97 52 57 86 66 76 73 85 95 70 70 67 96 61 56 32 40 80 45 65 82 90 58 61 52 84 69 78 78 71 76 50 86 78 62 62 60 69
 DISB  62 55 90 97 64 60 79 57 74 68 81 90 75 66 65 95 50 56 42 37 76 43 58 80 90 55 52 52 80 72 73 68 66 66 48 80 77 52 62 53 67
 DISC  52 52 93 96 54 62 82 65 71 71 82 92 72 72 65 97 47 57 34 34 73 39 65 79 90 52 50 49 83 69 77 70 69 66 45 84 79 47 64 55 66
 DISD  51 52 91 96 51 53 77 62 69 67 81 90 73 69 63 95 43 58 35 32 72 41 56 76 91 55 45 45 78 64 74 73 62 74 53 82 77 50 63 51 65
 DISE  54 48 94 97 51 62 81 60 73 77 84 93 76 71 72 97 45 62 44 35 81 45 69 84 90 63 53 55 86 77 83 79 65 74 48 84 76 59 64 57 69
 STOT  56 52 92 96 55 59 81 62 72 71 82 92 73 70 66 96 49 58 37 36 76 42 63 80 90 56 52 50 82 70 77 73 67 70 48 83 78 53 63 55 67
 943 SCI LEVL 9          TECH5005            11/07/86
PERCENTAGE OF CORRECT ANSWERS PER ITEM
NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY **

SCHL     1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 TOTAL

 4160   69 50 94 94 50 58 77 91 86 83 72 86 66 75 72 91 50 44  8 66 83 50 66 83 88 44 72 72 97 72 83 80 55 75 44 86 80 58 52 55 69
 4170   50 31 93 ** 62 31 ** 25 81 93 93 93 68 87 56 93 31 62 37 31 68 43 87 81 93 43 68 31 81 87 68 87 81 87 68 81 75 62 81 81 69
 4173   40 33 88 96 40 55 88 74 62 70 85 96 62 70 55 ** 29 51 25 25 77 55 51 77 92 66 18 25 85 59 55 48 70 88 44 81 88 59 70 59 63
 4220   76 47 ** 90 71 60 95 57 95 ** 85 ** 80 71 80 85 76 76 38 38 90 57 71 71 71 80 66 80 90 71 76 90 80 76 61 ** 80 52 61 76 76
 4221   92 39 85 ** 25 42 64 39 50 32 67 85 50 39 50 96 50 28 17 21 57 14 42 46 75 32 32 14 71 57 57 57 50 53 46 78 53 25 42 28 50
 4570   72 80 94 97 50 58 88 58 69 58 88 94 80 80 69 97 80 58 22 19 66 25 83 88 88 75 77 58 80 72 91 86 75 77 50 80 80 63 69 75 72
 4571   43 45 96 96 51 45 88 50 87 90 85 96 77 75 77 98 46 61 25 41 88 40 58 90 95 40 58 46 82 66 75 83 80 75 45 85 85 59 48 54 68
 4310   88 83 38 94 72 69 83 63 86 80 88 88 83 58 69 80 75 55 36 44 91 58 77 91 75 55 63 47 75 80 77 83 52 69 52 88 88 86 75 61 73
 4240   70 57 98 ** 59 80 ** 91 87 85 96 ** 71 75 73 96 70 71 50 64 89 49 56 89 96 87 61 82 85 73 87 73 80 96 49 91 84 84 71 73 79
 4241   30 43 ** ** 47 52 91 39 69 65 78 ** 34 65 39 ** 60 47 21 13 73 13 56 95 ** 34 69 56 91 65 73 86 86 82 56 86 65 39 30 43 62
 4270   27 27 95 95 40 22 90 81 90 77 ** ** 86 81 63 ** 81 59 40 18 50 31 45 72 90 81 77 50 77 95 81 ** 68 72 59 90 72 63 63 63 69
 4310   85 48 88 96 33 44 81 55 37 51 77 ** 33 66 11 ** 22 14 14 14 88 55 74 70 92 33 44 25 92 62 85 66 55 66 11 88 77 70 59 51 58
 4311   44 77 ** ** 38 55 88 77 88 72 77 ** 72 38 94 ** 83 61 44 27 77 27 77 88 94 72 66 66 94 55 77 83 61 55 61 72 61 61 72 33 70
 4370   62 55 92 ** 55 22 51 55 48 22 59 92 55 40 66 ** 44 48  0 40 51 48 29 62 92 18 66 14 77 29 59 48 66 29 18 77 55 18 40 29 51
 4371   75 62 ** 93 65 84 96 87 65 93 ** 96 87 84 84 ** 87 71 59 59 ** 65 87 ** ** 68 87 53 34 78 87 90 78 93 68 87 96 65 78 87 82
 4430   79 ** ** ** 70 95 ** 87 95 83 95 ** ** 95 91 ** 83 87 87 70 95 87 95 83 ** 91 62 83 95 91 95 91 95 ** ** ** 83 95 95 83 91
 DISA   64 55 94 97 52 57 86 66 76 73 85 95 70 70 67 96 61 56 32 40 80 45 65 82 90 58 61 52 84 69 78 78 71 76 50 86 78 62 62 60 69

 4030   66 58 95 95 66 66 66 54 54 70 95 87 37 33 66 ** 25 37 25 25 70 50 62 83 83 16 16 45 75 62 75 70 45 50 37 83 87 29 54 33 59
 4031   31 37 87 ** 37 43 75 37 55 43 62 87 56 62 43 ** 62 31  6 37 68 25  6 87 93 31 31 37 81 50 68 37 68 37 12 75 68 18 50 18 51
 4081   75 57 92 ** 85 78 96 71 71 75 78 96 82 78 85 92 78 75 71 57 82 78 60 78 92 71 75 78 82 89 89 85 71 78 78 89 85 82 71 75 79
 4082   83 91 83 ** 87 62 66 75 87 87 83 87 54 83 41 95 29 54 29 41 79 41 79 83 95 50 50 66 79 66 70 75 91 91 25 79 70 45 75 58 70
 4290   51 31 83 98 55 51 85 35 62 70 77 87 77 61 51 96 31 40 24 18 74 31 40 72 83 35 29 38 74 74 64 74 53 62 53 70 72 51 55 50 58
 4560   67 51 93 98 82 84 81 62 84 73 89 95 73 75 82 96 50 79 28 46 85 46 62 85 95 62 57 62 87 89 85 76 76 81 51 84 84 78 65 65 74
 4561   50 44 83 ** 55 66 66 44 88 66 88 94 77 61 27 ** 22 33 50 50 83 33 66 72 88 38 44 38 94 44 61 77 33 44 27 94 88 38 38 61 61
 4690   46 45 91 98 45 48 63 40 62 57 69 87 83 45 66 94 49 53 37 30 65 40 33 68 88 50 41 37 78 66 67 43 57 51 34 72 72 30 50 40 57
 4070   80 92 84 94 94 51 94 98 94 84 98 96 ** 94 90 94 88 92 75 75 88 48 71 88 94 90 82 67 78 71 80 76 78 92 88 94 84 78 75 67 84
 4080   38 33 88 94 44 55 94 66 66 66 88 83 88 94 50 88 38 55 50 44 72 44 83 88 88 44 44 55 88 77 72 44 61 55 33 66 66 50 50 61 64
 4151   59 49 88 94 57 64 82 56 63 57 74 82 72 58 50 93 37 55 40 33 79 33 51 74 83 48 43 50 70 65 67 58 70 57 50 71 68 49 60 43 61
 4190   50 43 93 98 50 38 75 43 79 75 82 96 82 74 64 95 53 46 53 27 64 61 72 88 87 64 62 51 79 74 72 88 70 72 50 77 82 46 72 50 67
 4192   92 84 97 ** 86 68 84 63 86 71 97 84 60 60 76 97 28 52 28 23 78 23 92 84 94 86 76 55 86 89 84 84 57 71 65 94 76 68 73 50 73
 4200   68 68 90 ** 65 87 90 62 84 65 78 93 81 71 68 ** 75 46 46 12 62 28 59 90 93 28 46 53 93 65 65 71 53 56 25 90 81 43 81 62 67
 4201   89 86 96 96 89 75 89 89 ** 93 93 96 68 82 86 ** 93 75 82 89 ** 89 75 93 96 89 82 86 89 96 93 ** 96 93 75 93 96 62 75 82 88
 4670   47 36 94 94 31 42 78 57 47 52 57 ** 57 57 36 ** 47 21 10 15 89 15 63 63 ** 31 47 31 78 52 63 42 68 42 15 84 68 36 36 73 54
 DISB   62 55 90 97 64 60 79 57 74 68 81 90 75 66 65 95 50 56 42 37 76 43 58 80 90 55 52 52 80 72 73 68 66 66 48 80 77 52 62 53 67

 4351   47 71 91 97 58 60 73 52 56 58 63 84 58 63 47 95 50 50 17 23 69 34 54 69 91 36 56 47 73 69 60 45 36 39 32 84 65 21 32 26 56
 4130   35 31 94 98 29 50 79 77 74 59 94 98 59 68 57 ** 50 44 18 40 83 35 64 92 ** 61 24 64 87 75 83 62 81 68 31 88 92 75 68 64 66
 4131   ** ** ** ** 89 84 ** 94 89 94 94 89 ** 84 78 ** 94 ** 89 94 94 78 89 89 94 89 89 78 ** ** ** 84 94 89 89 94 94 63 84 84 91
 4140   63 70 96 90 53 66 90 56 60 60 76 96 76 70 53 ** 40 53 46 33 80 60 43 80 86 53 36 43 93 70 73 53 76 53 56 83 73 26 50 53 65
 4150   29 34 89 93 36 46 82 72 40 53 76 91 68 46 36 ** 36 31 17 17 72 31 36 57 87 48 48 36 74 40 63 48 44 48 34 68 68 25 53 42 53
 4250   62 55 90 91 63 49 88 67 55 56 77 89 77 68 63 96 37 51 36 25 67 31 67 81 89 45 50 40 77 69 75 80 76 62 52 85 83 30 69 55 64
 4340   43 26 93 97 78 74 74 62 81 84 97 ** 98 77 45 96 44 41 25 21 70 32 70 86 97 29 49 53 87 70 87 78 69 83 64 87 84 48 78 79 69
 4350   47 21 90 96 49 32 80 54 72 58 69 89 51 69 75 96 41 58 29 37 51 24 65 69 91 57 45 32 81 64 75 67 63 65 31 83 76 45 63 45 60
 4390   76 76 96 96 53 50 88 92 92 96 84 ** 96 69 92 ** 76 88 46 57 69 57 80 65 88 65 73 38 84 84 84 96 73 50 46 76 92 53 80 69 76
 4391   40 45 90 ** 65 85 ** 85 40 70 95 90 ** 40 65 ** 65 40  5 50 60 25 20 85 75 65 20 70 85 55 75 20 60 45 20 85 60 80 45 60 62
 4400   53 30 97 92 46 75 88 46 72 88 81 84 52 79 59 91 44 59 24 31 81 26 53 84 85 42 47 59 85 62 85 89 72 82 47 79 72 47 76 60 66
 4550   88 ** 92 ** 88 88 88 85 85 85 92 96 85 88 85 ** 74 59  7 11 92 51 81 88 88 59  3 55 92 88 88 96 25 88 74 96 74 62 70 66 76
 4022   37 72 82 93 44 68 55 51 65 65 65 86 62 65 62 82 58 37 37 20 75 62 68 58 79 31 37 43 75 68 68 41 62 27 20 79 62 31 13 34 56
```

SCIENCE - LEVEL 5

INSTRUMENT AND POPULATION DESCRIPTION

This is a forty-item multiple choice test measuring selected circled objectives in the curriculum strands of Skills/Processes (4 items), Life Sciences (13 items), Human Biology/Health (3 items), Physical Sciences (10 items), Earth Science (5 items), and Astromony (5 items).

The population includes all students enrolled in grade 5 who took an on-level test and for whom valid answer sheets were submitted.

SYSTEM STRENGTHS AND WEAKNESSES

Overall, students performed only fairly well on this test with a system-wide average score of 67%. Generally, students appear to be mastering the objectives in the domains of Skills/ Processes and Astromomy and most of the objectives tapped in Life Science and Human Biology/Health. Within these latter two domains there are isolated objectives which are not being mastered by more than fifty percent of the students. In Life Science students are having difficulty knowing the interactions needed for photosynthesis (item # 11) and in Human Biology/Health students students are not clear on the difference between an artery and a vein (item # 19).

The most severe deficits as strands lie in Physical Science and Earth Science where of fifteen items, there are seven that fewer than fifty percent of the students answered correctly. In Physical Science students are having difficulty with materials that cause sliding friction, with identifying materials that are good and bad conductors of heat, identifying simple machines, and describing how white light can be separated into colors (item #'s 22, 24, 28, and 30). In Earth Science students are having difficulty identifying the use of a barometer, the effect of geological forces on the earth's surface, and types of fossils (item #'s 32, 34, and 35).

BOSTON PUBLIC SCHOOLS

DEPARTMENT OF EDUCATIONAL TESTING

CURRICULUM REFERENCED FINAL SCIENCE - LEVEL 5

1985 - 1986

B.3	Identify appropriate measuring instruments & units of measure	1	
B.7	Measure temperature to nearest degree in Fahrenheit & Celsius	2	
B.9	Make estimates of length, mass, temperature, time or volume	3	
B.11	Record info. in form of sketches, graphs & interpret	4	
D.20	Cell is basic unit of all living things	5	
D.11	Classify animals as vertebrates & invertebrates; 5 kinds vertebrate	6	
D.12	Identify adaptations in a given animal's body	7	
D.21	Smallest protista has single cell; larger animals millions of cells	8	
D.26	Survival of insects, fish & plants that are food of many animals	9	
D.6	Recognize various parts of a flower & function of each	10	
D.7	Process of photosynthesis to produce starch (glucose)	11	
D.10	Identify similar life functions of many animals	12	
D.11	Classify animals as vertebrates & invertebrates; 5 kinds vertebrate	13	
D.17	Describe various types of animal and plant behavior	14	
D.7	Process of photosynthesis to produce starch	15	
D.9	Identify basic conditions for & stages of, seed germination	16	
D.30	Humans are cared for & protected by parents longer than any animal	17	
E.7	Identify brain as control center of the nervous system	18	
E.10	Identify difference between artery and vein	19	
E.9	Heart beats faster when we exert ourselves & slows when we rest	20	
F.20	Examples of materials that are electrical conductors	21	
F.25	Materials that cause sliding friction & others that cause little	22	
F.1	Identify the characters of three kinds of matter	23	
F.14	Identify materials that are good & bad conductors of heat	24	
F.15	Group objects that are magnetic and non-magnetic	25	
F.18	Workings of an electrical switch	26	
F.20	Examples of materials that are electrical conductors & insulators	27	
F.22	Six simple machines that are sued in everyday situations	28	
F.26	Earth's gravity pulls objects straight down toward center of planet	29	
F.32	Describe how white light can be separated out into spectrum/colors	30	
G.5	Define humidity as the amount of moisture in the air	31	
G.11	Identify a barometer as an instrument that measures air pressure	32	
G.3	Describe how the water cycle works	33	
G.15	Earth's surface is being built up & worn down by geological forces	34	
G.18	Why there are few fossils of some animals & many of others	35	
H.8	Identify constellations as group of stars	36	
H.7	Sun is part of the Milky Way galaxy, which contains billions stars	37	
H.3	What our solar system contains besides the sun and planets	38	
H.5	Earth is almost certainly only planet that can sustain life	39	
H.6	Sun and Earth's size	40	

```
 953 SCI LEVL 5          TECR5005              11/07/86
PERCENTAGE OF CURRECT ANSWERS PER ITEM
NOTE 100 PERCENT UV A PARTICULAR ITEM IS INDICATED BY **

SCHL     1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 TOTAL

 4160   95 95 55 ** 60 55 93 74 67 74 76 97 76 62 76 90 86 86 41 93 83 62 93 83 93 93 76 55 76 62 86 81 67 55 93 79 97 93 93 62 78
 4170   88 ** 70 ** 58 58 76 35 52 58 29 68 47 41 58 88 73 35 11 94 70 11 76 35 ** 88 58 35 94 11 58 58 64 41 47 70 76 70 94 64 62
 4173   95 ** 70 95 50 55 90 75 65 50 20 85 20 65 20 70 65 40 35 95 75 40 65 10 ** 85 75 25 85 15 60 50 70 10 40 70 90 75 95 65 61
 4220   ** ** 68 ** 75 68 87 50 62 75 31 ** 93 75 50 50 87 10  0 ** 87 50 81 31 ** 75 81 31 ** 31 81 43 43  6 18 50 93 ** 87 93 67
 4221   91 ** 82 82 82 60 78 56 65 60 26 95 69 65 39 82 86 69 56 91 73 30 65 65 86 69 66 52 82 60 73 34 52 26 43 47 73 73 82 56 67
 4570   86 ** 68 86 60 68 76 44 50 52 23 84 39 44 63 92 71 55 26 94 78 65 63 44 86 73 76 23 73 52 57 13 36 15 39 18 52 73 89 68 59
 4571   94 98 84 96 84 78 90 76 72 88 62 94 74 80 54 78 90 66 48 98 88 40 96 70 96 90 88 50 98 50 82 60 62 44 66 68 90 92 98 76 77
 4010   96 ** 66 89 78 52 70 55 58 56 52 87 56 61 61 84 75 46 20 95 78 35 69 16 93 81 75 36 84 29 55 23 29 33 38 60 72 75 92 56 62
 4240   82 98 69 93 65 50 88 69 51 59 19 85 75 52 55 86 92 64 46 94 78 15 76 27 88 85 77 21 86 38 71 56 53 39 32 69 89 89 92 46 65
 4241   88 ** 88 ** ** ** ** ** ** 66 ** ** ** 88 ** 77 ** 77 88 ** 77 22 ** 88 ** ** 88  0 77 88 77 66 66 88 66 11 ** 88 ** 77 84
 4270   94 ** 78 94 ** 68 84 89 84 89 84 ** 84 73 94 ** ** 89 89 94 84 84 ** 78 ** ** 84 84 78 78 89 84 73 94 ** 68 ** 94 ** 84 88
 4310   93 ** 93 ** 81 93 ** 81 93 93 50 ** 75 50 75 93 ** ** 68 ** 87 75 93 75 93 87 81 50 81 62 75 18 68 43 62 50 87 75 ** 87 80
 4311   ** ** 95 90 90 85 ** 80 66 95 71 ** 90 85 90 90 ** 76 71 90 76 71 95 28 ** ** 85 71 95 23 71 42 52  4 23 38 85 95 90 61 77
 4370   94 ** ** 88 77 94 88 22 94 88 83 ** 94 77 94 ** 94 88 83 ** ** 88 88 88 ** 94 88 88 ** ** ** 22 83 88 16 11 55 61 72 16 80
 4371   90 95 81 ** 68 68 86 77 90 36 54 95 77 72 59 90 ** 81 54 ** 95 59 95 40 ** 81 86 18 95 36 68 81 50 13 72 63 90 90 ** 72 74
 4430   ** ** ** 80 80 80 ** 90 90 90 80 ** 80 90 80 80 90 90 63 90 ** 80 80 70 90 ** 70 80 ** 90 70 80 80 50 60 90 90 80 ** 90 85
 DISA   92 98 75 93 73 65 85 65 66 68 48 92 69 64 63 85 86 65 44 95 82 46 81 47 93 86 79 41 87 46 71 49 54 38 50 57 82 83 92 63 70

 4030   ** ** 60 ** ** 80 ** 93 80 80 46 ** ** ** 93 93 ** 86 66 ** 86 80 73 66 ** 93 66 53 ** 86 46 86 73 66 93 93 ** ** 86 73 85
 4031   ** ** 84 92 53 69 92 84 76 84 23 92 38 84 38 53 53 46 15 92 76 23 69 38 92 92 84 30 84 30 76 61 38 38 15 69 53 92 76 46 64
 4081   ** ** ** 96 ** ** ** ** 96 ** ** 92 ** 84 80 96 ** 96 19 96 96 92 ** 69 ** ** 96 26 ** 26 ** 84 92 80 61 65 92 96 84 53 86
 4082   75 87 62 87 ** 93 68 ** 56 ** ** 87 ** 37 ** 75 68 31 12 93 62 50 68 18 81 62 68 ** 68 ** 37 31 62  6 43 50 75 62 68 68 68
 4290   93 98 81 96 82 81 79 77 58 67 51 86 58 67 81 82 87 46 17 93 87 41 77 27 91 81 89 12 87 51 65 15 62 24 32 43 79 81 91 68 67
 4560   97 ** 88 91 93 91 82 77 73 77 77 95 40 68 55 84 88 68 31 ** 86 37 91 42 88 95 86 35 95 68 48 51 57 33 48 60 82 93 93 82 74
 4561   76 95 57 95 76 80 ** 80 80 52 47 90 85 57 66 60 95 52 28 ** 80 14 80 28 95 76 76 47 85 61 66 42 42 14 38 52 71 76 95 80 68
 4690   90 98 84 84 66 61 83 53 57 52 23 95 33 35 38 81 84 47 11 92 61 47 74 28 81 61 57 28 71 43 46 28 47 14 32 32 47 71 81 40 56
 4070   96 96 63 87 42 48 78 57 72 60 51 75 48 48 54 69 81 60 36 93 72 39 78 48 81 69 69 45 69 51 75 45 66 54 63 57 57 57 78 51 64
 4080   72 86 68 90 81 68 81 50 72 45 22 77 72 22 54 77 72 54 31 77 72 54 72 54 81 72 63 68 81 31 68 50 40 31 31 63 54 81 90 68 62
 4151   92 98 78 91 73 59 85 70 56 64 38 92 67 59 46 84 85 63 32 94 77 66 77 46 98 87 77 57 80 53 76 47 47 40 52 28 74 87 90 49 68
 4190   86 96 84 90 92 59 78 76 55 55 40 92 78 69 67 94 80 51 34 98 80 67 84 63 90 94 69 51 86 59 48 28 65 32 46 51 55 73 92 71 69
 4192   96 ** 88 ** 30 61 88 61 57 61 34 92 61 57 46 80 76 42 23 88 88 30 84 46 96 80 84 42 96 50 42 46 65 46 42 57 73 92 ** 92 67
 4200   93 ** 93 ** ** 87 93 81 62 93 75 93 87 87 81 93 93 87 68 ** ** 68 93 93 ** ** ** 87 93 87 87 75 62 56 ** 87 ** ** 93 93 88
 4201   88 ** 88 96 85 62 ** 70 66 88 37 96 70 59 88 96 74 37 48 96 92 77 81 22 70 85 74 66 85 55 66 85 40 40 33 29 40 85 81 48 70
 4670   89 ** ** 94 68 78 89 42 68 ** 52 78 63 31 73 68 68 **  5 ** 78 26 63 31 94 68 68 ** 78 31 47 ** 68  5 26 89 78 94 84 57 69
 DISB   91 97 81 92 77 70 85 71 65 68 48 90 63 58 62 83 83 58 27 94 80 52 80 43 89 81 76 46 84 53 61 47 57 34 45 50 68 82 87 62 68

 4351   96 ** 73 83 60 70 83 60 66 60 56 90 50 50 46 56 83 83 43 95 73 86 73 90 90 83 53 20 86 53 43 26 26 20 13 20  3 10 83 26 59
 4130   72 96 60 93 45 69 87 63 57 18  9 93 54 60 51 60 75 24 48 93 78 30 75 27 90 72 84 27 81 51 60 72 27 12 24 63 63 84 93 39 60
 4131   70 95 62 83 37 62 75 20 58 25 20 91 20 62 50 79 79 41 20 91 79  0 45 29 87 79 62 20 75 25 41  4 37 16 16 41 54 75 79 45 51
 4140   84 96 61 ** 30 57 73 30 38 23 15 88 19 38 46 76 84 15 11 96 80 57 57 42 69 88 73 15 69 15 42 15 46 19 30 38 34 61 80 30 51
 4150   69 ** 29 94 67 56 86 89 81 81 75 91 64 56 56 83 75 27 13 91 89 56 81 40 91 86 75 54 86 70 62 35 72 67 72 54 59 86 89 64 70
 4250   90 ** 82 92 64 66 94 60 52 74 62 ** 80 72 78 80 84 68 32 94 76 56 84 50 84 78 66 52 84 62 50 48 50 32 40 58 82 78 70 62 69
 4340   93 ** 82 91 53 30 89 60 73 57 23 93 82 39 60 94 86 63 28 98 89 45 82 58 95 91 98 32 91 78 61 32 53 20 63 72 86 97 95 91 71
 4350   86 ** 63 93 77 72 77 72 48 51 27 84 33 68 41 77 77 45 27 91 75 46 69 43 87 76 74 32 81 30 60 47 45 32 32 40 56 77 75 61 61
 4390   ** ** 73 95 78 78 91 91 86 65 56 95 78 56 56 91 95 78 73 ** 91 56 86 65 95 95 91 39 95 30 82 60 56 26 65 47 86 73 86 60 75
 4391   ** ** 93 ** 60 93 86 ** 53 53 33 93 80 60 86 73 93 60 53 ** ** 73 73 40 93 80 86 40 86 66 40 60 53  6 26 73 86 66 93 53 71
 4400   93 ** 73 90 77 66 84 81 71 71 35 93 63 61 63 75 86 63 35 97 71 38 86 28 91 86 81 25 90 27 75 43 67 30 34 47 57 84 94 70 67
 4550   ** ** 65 96 53 42 92 69 92 69 23 92 19 92 30 88 92 57 23 ** ** 92 96 42 92 53 69 30 84 15 73 19 38  7 53 34 42 73 96 34 63
 4022   ** ** 77 77 44 66 88 44 55 44 66 ** 55 22 55 88 77 33  0 ** 88 33 88 11 ** 88 66 33 ** 44 55 11 11  0 22 55 55 66 88 44 59
 953 SCI LEVL 5          TECR5005           11/07/86
PERCENTAGE OF CORRECT ANSWERS PER ITEM
NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY **

SCHL    1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 TOTAL

 4052  86 ** ** 93 86 86 ** 53 93 80 33 93 33 80 66 80 86 53 53 ** 80 13 86 60 ** ** 80 60 93 20 80 53 46 20 46 40 66 60 93 93 71
 4100  95 98 83 96 77 80 91 86 72 86 51 88 61 86 60 83 88 70 53 ** 96 61 66 56 96 88 92 32 87 66 71 54 67 35 50 55 59 86 87 71 75
 4120  ** ** 90 95 85 35 85 90 66 14 66 85 66 76 47 95 90 66 57 ** ** 42 76 42 95 95 90 61 40 90 42 14 28 61 66 47 90 95 95 76 72
 4121  72 ** 63 ** 72 54 63 45 63 81 36 90 27 81 54 81 90 36 36 90 90 18 90  9 ** 90 72  9 81  9 27 36 36 18  9 18 54 63 ** 45 58
 4530  97 ** 86 ** 88 88 94 86 80 83 66 97 91 69 91 94 94 94 55 94 97 75 83 77 97 91 83 80 86 61 72 75 75 72 75 83 91 94 97 94 85
 4531  88 94 82 ** 82 70 82 70 70 76 17 88 76 41 58 88 76 23 11 94 76 17 64 35 76 76 41 17 82 23 35 23 58  5 52 35 52 76 76 47 59
 4590  92 ** 61 97 79 64 92 71 51 64 64 84 82 66 79 92 89 61 41 92 82 79 71 38 92 84 79 35 71 74 69 33 69 43 53 41 84 87 97 35 71
 4592  ** ** 75 ** ** ** ** 50 ** 75 25 ** 75 ** ** ** ** ** 25 ** ** 50 75 75 ** ** 75 25 ** 50  0 75 50 50  0 ** 75 75 75 75 76
 4630  96 ** 78 92 72 75 86 89 83 67 56 92 69 64 56 66 92 69 13 98 92 58 76 41 96 80 73 53 96 52 52 33 50 18 50 55 60 90 89 63 70
 DISC  91 99 73 93 68 65 86 72 67 62 42 91 60 63 59 80 85 58 34 96 84 52 78 46 91 83 78 37 86 49 60 41 53 30 44 51 64 80 88 62 68

 4260  89 ** 72 96 82 72 62 68 75 86 41 89 55 51 37 72 75 82 13 ** 82 44 89 20 96 75 65 31 93 34 51 34 48 13 44 41 86 89 96 72 66
 4280  95 ** 95 ** ** ** ** 95 ** ** ** ** ** 90 ** 76 ** ** 90 95 ** ** 95 95 ** ** ** 95 95 95 52 66 85 52 61 85 85 90 ** 38 90
 4283  92 98 66 94 52 56 79 67 58 69 49 94 58 47 54 77 73 60 32 84 60 41 67 13 84 71 75 47 83 37 56 56 39 28 35 60 58 83 71 54 62
 4301  ** ** 80 ** 73 80 86 86 20 80  6 60 26 26 40 80 80 53 13 86 60 33 80 26 93 73 ** 20 66  6 40 26 46 13 20 20 73 60 93 46 57
 4640  84 97 67 86 71 52 86 50 59 46 20 84 33 45 50 85 64 33  4 95 76 33 76 17 90 73 71 17 82 41 48 25 50 20 21 40 53 82 88 55 57
 4650  90 98 73 94 68 81 90 65 62 59 44 93 63 66 59 77 80 46 37 96 84 45 77 44 96 84 81 44 90 51 75 47 63 27 55 60 70 82 93 66 69
 4062  97 ** 91 97 97 91 97 91 85 91 91 ** 82 94 82 50 ** 91 88 ** 97 82 97 79 ** 97 91 41 97 88 94 82 55 32 94 70 97 91 91 67 86
 4321  95 ** 81 ** 77 77 ** 54 54 50 22 86 68 54 50 86 95 40  4 ** 81 40 86 22 90 90 77 36 90 27 50 13 40  4 40 45 40 77 86 63 62
 4322  89 ** 66 93 50 83 87 52 54 47 27 85 50 39 64 85 56 45 25 91 68 22 83 22 91 79 58 31 81 20 41 33 52 25 20 54 66 85 91 68 59
 4361  88 ** 82 82 70 41 82 64 76 58 41 94 35 35 82 68 82 64 47 88 64 11 88 35 82 94 88 17 88 17 52 11 35 11  5 64 70 88 94 70 62
 4541  86 93 68 86 36 40 86 45 45 45 13 90  9 50 27 72 81 40  0 ** 68 36 81 13 86 81 72 40 90 22 63 13 36 18 22 36 50 77 72 31 53
 4543  ** 92 76 96 36 88 88 52 60 28 16 68 36 24 52 80 84 16  0 ** 88 32 72  8 76 76 76 20 80 32 64 20 60 16 16 48 48 80 92 36 55
 DISD  91 98 73 93 67 71 88 63 62 60 39 88 52 53 57 78 77 52 28 94 77 42 80 31 91 81 76 35 86 42 59 38 52 23 38 53 65 83 88 58 65

 4053  93 ** 68 ** 72 55 96 89 51 51 65 96 65 72 72 86 82 51 37 96 72 65 89 27 93 89 79 31 93 79 37 37 44  3 24 79 86 58 93 55 68
 4061  97 ** 79 95 76 69 90 93 69 69 60 ** 76 55 39 86 97 58 13 97 88 23 81 27 95 81 74 16 93 39 48 37 48 34 51 74 88 86 95 76 69
 4113  ** ** ** 95 95 ** 90 54 ** 90  9 90 18 27 36 90 90 59 13 ** 90 68 81 68 ** 90 90 40 86 40 68 27 50 13 31 45 54 90 81 90 69
 4210  92 ** 57 97 62 70 90 62 75 90 42 90 32 60 80 82 92 55 27 ** 70 30 80 25 90 85 80 10 80 87 37  5 40 10 20 45 82 87 90 75 64
 4230  95 97 72 94 68 62 84 63 62 62 36 90 41 59 60 75 80 55 14 93 88 40 81 30 91 80 74 33 78 35 51 25 50 16 26 54 54 81 81 57 62
 4271  ** ** 86 97 66 72 97 80 83 63 41 94 63 77 60 80 97 66 55 97 83 16 88 50 91 77 94 44 ** 41 72 38 52 30 38 80 94 97 97 86 75
 4360  93 97 68 93 63 68 79 72 47 77 25 97 54 47 65 93 88 50 18 95 79 31 90 36 93 81 79 18 81 40 43 22 47 31 36 63 40 75 88 54 63
 4410  96 98 69 95 88 82 85 88 93 95 61 ** 65 76 73 88 88 58 46 98 90 66 87 39 93 85 84 33 84 50 50 12 49 15 36 47 65 87 93 52 71
 4580  96 98 84 90 62 61 88 68 54 62 34 87 49 53 52 77 91 50 35 95 88 41 82 36 94 78 84 32 78 36 58 38 51 13 40 47 62 82 89 50 64
 4620  84 98 67 89 78 59 77 56 55 66 31 77 38 43 57 76 68 58 28 90 67 39 61 39 81 67 79 33 73 28 56 17 43 26 37 36 45 64 77 55 58
 DISE  93 98 74 93 72 66 86 70 65 70 39 90 49 57 61 81 85 57 28 95 82 41 80 36 91 79 80 30 82 42 52 25 48 19 34 53 62 79 87 60 65

 DISA  92 98 75 93 73 65 85 65 66 68 48 92 69 64 63 85 86 65 44 95 82 46 81 47 93 86 79 41 87 46 71 49 54 38 50 57 82 83 92 63 70
 DISB  91 97 81 92 77 70 85 71 65 68 48 90 63 58 62 83 83 58 27 94 80 52 80 43 89 81 76 46 84 53 61 47 57 34 45 50 68 82 87 62 68
 DISC  91 99 73 93 68 65 86 72 67 62 42 91 60 63 59 80 85 58 34 96 84 52 78 46 91 83 78 37 86 49 60 41 53 30 44 51 64 80 88 62 68
 DISD  91 98 73 93 67 71 88 63 62 60 39 88 52 53 57 78 77 52 28 94 77 42 80 31 91 81 76 35 86 42 59 38 52 23 38 53 65 83 88 58 65
 DISE  93 98 74 93 72 66 86 70 65 70 39 90 49 57 61 81 85 57 28 95 82 41 80 36 91 79 80 30 82 42 52 25 48 19 34 53 62 79 87 60 65
 STCT  91 98 75 93 71 67 86 69 65 65 43 90 58 59 60 81 84 58 32 95 81 47 79 41 91 82 78 38 85 47 60 39 53 29 42 53 67 81 88 61 67
```

SCIENCE - LEVEL 6

INSTRUMENT AND POPULATION DESCRIPTION

This is a forty-item multiple choice test measuring selected circled objectives in the curriculum strands of Skills/Processes (4 items), Life Sciences (11 items), Physical Science (15 items)), Earth Science (8 items), and Astronomy (2 items).

The population includes all students enrolled in grade 6 who took an on-level test and for whom valid answer sheets were submitted.

SYSTEM STRENGTHS AND WEAKNESSES

Overall, students performed poorly on this test with a system-wide average score of 51%. Generally, students appear to be mastering most of the objectives measured by Physical Science; however, there are three items with which students have difficulty. One of the items addresses the movement of heat to a cooler place (item # 20), and the other two items tap knowledge of machinery and types of levers (item #'s 24 and 25).

On the other domains students performed poorly, of the remaining twenty-five items, there are sixteen which fewer than fifty percent of the students answered correctly. In the domain of Skills/Processes students have difficulty with measuring weight and volume in English and metric units (item #'s 2 and 4). This weakness was also displayed in the Mathematics test at Level 6. In Life Sciences the difficulties lie with identifying the parts of a flower, stages in life cycles, cell or membrane, cell division, an ecosystem, and current species in danger of becoming extinct (item #'s 6, 9, 10, 12, 13, and 15). In the domain of Earth Science students are not mastering the concepts of various aspects of the weather and geology (item #'s 31, 32, 34, 35, 36, 37, and 38). In Astronomy students are unable to identify the latest scientific theory on the origins of the universe (item # 39).

BOSTON PUBLIC SCHOOLS

DEPARTMENT OF EDUCATIONAL TESTING

CURRICULUM REFERENCED FINAL SCIENCE - LEVEL 6

1985 - 1986

B.5	Measure length in English or metric units (Correlate w/Math Objs.)	1	
B.6	Measure weight in English or metric units (Correlate w/Math Objs.)	2	
B.8	Measure temperature in degrees Fahrenheit or Celsius	3	
B.9	Measure volume in English or metric units	4	
D.4	Describe life cycle of a flowering plant	5	
D.6	Identify common parts of a flower & function of each	6	
D.8	Describe the process of photosynthesis	7	
D.10	Identify major characters of vertebrates & invertebrates	8	
D.13	Describe stages in life cycle of a frog or other animal	9	
D.17	Describe or sketch a cell and its membrane	10	
D.19	Identify the basic materials that cells need to maintain life	11	
D.20	How cells reproduce themselves by cell division	12	
D.22	Describe an ecosystem; in terms of its main ingredients	13	
D.28	Describe the three key elements in natural selection	14	
D.29	Identify current species that are in danger of becoming extinct	15	
F.1	Definition of matter & categorize as either solid, gas or liquid	16	
F.2	All matter is made up of tiny particles called atoms	17	
F.5	When substances are heated, atoms move around quickly & expand	18	
F.7	Identify advantages & disadvantages of forms energy in use today	19	
F.11	Principle that heat moves from a warmer to a cooler place	20	
F.13	A wire with electricity passing thru has a magnetic field	21	
F.16	Current electricity consists of a flow of electrons along a path	22	
F.19	Identify compound machines &work in the city around us	23	
F.19		24	
F.20	Distinguish between the three classes of levers	25	
F.22	Earth's gravity is the force that pulls all matter down	26	
F.25	Sound is a form of energy that is produced by a vibrating object	27	
F.27	Contrast the loudness of a sound with the pitch of a sound	28	
F.30	Properties of light	29	
F.35	Identify the sequence of colors in the spectrum	30	
G.3	Distinguish between weather & climate in 2 cities	31	
G.4	Factors that determine the type of climate & weather	32	
G.9	Describe the conditions that lead to forms of precipitation	33	
G.12	Low barometric pressure is associated w/poor weather, high/good	34	
G.13	Identify the major layers of the atmosphere & approx. depth of ea	35	
G.14	Identify common weather instruments & what each measures	36	
G.20	Faults in the Earth's crust are primary cause of earthquakes	37	
G.23	Describe the destructive effect of topsoil erosion	38	
H.1	Latest scientific theory of the origins of the universe	39	
H.7	Identify those planets which have rings, Jupiter, Saturn & Uranus	40	

```
 963 SCI LEVL 6          TECR5305             11/07/86
PERCENTAGE OF CORRECT ANSWERS PER ITEM
NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY **

SCHL     1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 TOTAL

 2130   59 55 99 46 75 36 65 86 71 43 76 32 44 64 51 65 67 60 64 37 79 71 43 69 58 74 64 68 69 62 14 49 67 37 49 46 53 16 25 90 59
 2170   50 32 97 30 61 19 57 80 38 15 82 34 24 70 40 81 87 63 45 20 70 65 54 28 22 65 40 62 63 62 14 29 64 26 18 19 30 29 23 72 47
 4570   45 22 96 32 35  9 29 67 22 12 70 29 32 45 27 22 51 29 51 25 64 61 41 29  9 41 38 58 25 54  9 16 51 16 22 19 22 29 16 38 35
 2060   69 57 ** 34 69 34 57 73 19 50 73 42 53 88 19 65 73 53 50 26 80 76 65 46 53 80 61 65 69 69 34 38 69 38 53 38 50 69 57 73 57
 2070   60 38 98 32 60 26 42 72 32 20 77 23 23 74 50 43 64 43 46 22 73 67 53 16 30 57 40 61 60 38 24 34 64 35 34 16 25 29 17 80 45
 2240   56 20 97 46 64 14 52 74  5 26 71 46 11 83 37 70 66 44 37 16 70 57 48 17 28 42 51 57 55 41 14  8 43 20 25 16 29 35 20 69 42
 DISA   56 38 98 37 63 25 52 77 37 26 77 32 28 76 43 65 70 51 49 24 73 66 50 33 34 60 48 62 60 52 17 31 61 30 33 25 34 29 23 76 48

 2110   68 37 98 59 66 31 51 70 46 38 75 31 14 81 50 51 50 29 42 44 72 70 42 37 68 50 31 62 46 74 14 12 57 18 16 12 33 24 25 66 46
 2120   57 51 95 39 54 16 52 55 52 19 79 26 29 82 38 52 36 35 30 26 66 57 61 26 22 48 36 73 73 45 16 30 69 10 66 19 39 23 20 91 45
 2140   77 58 99 40 58 35 54 36 26 21 78 40 34 82 58 86 58 55 53 30 75 72 47 38 76 63 46 69 63 44 17 32 76 26 61 43 45 30 30 94 54
 2230   76 44 96 46 65 20 49 52 74 28 80 38 24 76 53 49 43 40 55 38 73 77 62 43 32 62 52 72 52 59 23 33 71 32 36 28 48 44 33 72 50
 2950   76 67 96 67 75 22 56 60 20 31 75 39 31 71 35 55 41 59 56 32 70 65 46 43 65 70 62 68 49 62 28 29 60 30 51 26 37 38 53 89 53
 DISB   73 55 97 51 65 27 53 66 29 27 77 37 28 78 47 61 46 48 51 33 71 69 51 39 56 62 50 69 56 56 21 29 67 26 49 29 41 34 36 85 51

 2330   61 36 97 43 56 29 50 56 27 15 73 38 36 77 43 56 60 46 50 30 65 59 54 42 51 60 50 58 56 55 20 26 59 32 59 32 40 36 19 76 48
 2080   49 29 98 32 64 25 45 74 14 31 76 40 29 81 51 70 40 33 50 37 69 70 57 55 40 60 44 70 61 37 39 33 67 17 18 13 25 22 20 77 46
 2160   56 52 ** 26 73 14 51 72 17 14 81 33 26 81 44 80 59 54 55 38 66 69 61 32 51 79 52 73 56 67 12 29 58 44 23 47 47 32 26 77 51
 2090   73 61 98 29 77 48 54 71 58 51 80 65 40 77 35 67 73 64 62 47 77 72 61 45 36 64 65 69 43 36 28 21 58 39 39 28 47 21 29 80 55
 2190   52 30 98 28 57 23 52 68 21 29 69 31 23 70 44 58 48 36 36 25 57 58 51 23 41 48 34 57 48 41 17 23 56 35 36 28 31 26 17 60 42
 2260   32 22 98 18 78 11 31 39 14 19 62 16 24 77 32 75 24 42 37 31 67 54 60  6 26 52 45 70 54 36 13  9 50 36 24 16 42 21 22 73 39
 DISC   56 38 98 32 65 26 49 64 25 24 74 38 30 77 43 65 53 45 48 33 66 63 57 36 44 61 48 64 53 48 21 25 58 34 38 29 38 28 21 73 47

 2310   77 65 98 50 68 45 64 79 55 53 78 49 43 85 69 70 70 61 72 50 66 65 63 50 63 65 52 57 62 69 41 43 74 43 44 37 42 51 44 87 60
 2040   62 47 99 32 71 43 53 87 60 28 77 32 29 86 43 78 60 59 53 40 80 81 64 28 31 65 40 65 58 68 38 28 65 20 53 34 37 40 26 84 54
 2050   81 70 98 54 69 40 56 73 51 55 91 55 30 90 42 58 62 71 83 56 88 82 41 67 59 69 52 72 54 70 27 32 67 49 26 43 45 20 21 86 59
 DISD   74 61 98 46 70 43 58 79 55 46 83 46 34 87 50 68 64 64 70 49 79 76 54 49 51 67 48 65 58 69 35 34 69 38 40 38 41 36 30 86 58

 2100   58 39 96 31 70 24 50 70 10 17 78 48 26 79 48 57 52 50 49 39 70 62 51 38 25 47 64 77 57 48 18 32 60 25 15 22 35 25 31 76 47
 2270   66 55 98 21 90 48 44 81 39 29 73 52 29 73 54 33 65 42 50 27 85 73 42 30 60 56 41 55 43 44 22 28 59 31 24 28 32 33 20 67 49
 2980   73 56 98 45 77 45 54 63 17 11 71 25 35 76 54 43 72 68 69 33 81 81 81 76 69 57 68 67 64 45 43 32 62 27 43 31 33 35 27 65 54
 4360   87 84 97 85 84 65 80 82 88 75 87 85 75 92 72 70 80 70 87 61 61 78 51 54 90 77 60 68 45 68 75 65 61 32 22 22 42 27 14 75 68
 DISE   70 56 97 43 80 44 55 73 34 29 76 49 39 79 56 49 66 57 62 38 79 73 57 50 59 58 59 67 53 50 37 37 60 29 27 26 35 30 24 70 53

 DISA   56 38 98 37 63 25 52 77 37 26 77 32 28 76 43 65 70 51 49 24 73 66 50 33 34 60 48 62 60 52 17 31 61 30 33 25 34 29 23 76 48
 DISB   73 55 97 51 65 27 53 66 29 27 77 37 28 78 47 61 46 48 51 33 71 69 51 39 56 62 50 69 56 56 21 29 67 26 49 29 41 34 36 85 51
 DISC   56 38 98 32 65 26 49 64 25 24 74 38 30 77 43 65 53 45 48 33 66 63 57 36 44 61 48 64 53 48 21 25 58 34 38 29 38 28 21 73 47
 DISD   74 61 98 46 70 43 58 79 55 46 83 46 34 87 50 68 64 64 70 49 79 76 54 49 51 67 48 65 58 69 35 34 69 38 40 38 41 36 30 86 58
 DISE   70 56 97 43 80 44 55 73 34 29 76 49 39 79 56 49 66 57 62 38 79 73 57 50 59 58 59 67 53 50 37 37 60 29 27 26 35 30 24 70 53
 STDT   64 48 98 41 67 31 51 70 34 29 77 39 31 79 47 62 58 52 54 35 72 69 54 40 48 61 50 65 56 54 25 30 63 31 38 29 38 31 26 78 51
```

SCIENCE - LEVEL 7

INSTRUMENT AND POPULATION DESCRIPTION

This is a forty-item multiple choice test measuring selected circled objectives in the curriculum strands of Skills/Processes (6 items), Science/Society (2 items), and Physical Science (32 items).

The population includes all students enrolled in grade 7 who took an on-level test and for whom valid answer sheets were submitted.

SYSTEM STRENGTHS AND WEAKNESSES

Overall, students performed very poorly on this test with a system-wide average score of 49%. Generally, students seem to be mastering the objectives in Science/Society and most of the objectives in Skills/Processes. In this latter domain students are having difficulty with objectives tapping measuring temperature in Fahrenheit and Celsius and using laboratory equipment (item #'s 2, 4, and 5). The weakness in knowing temperature readings was also found in the mathematics test at Level 7.

The most severe deficits as a strand lie in Physical Science where of thirty-two items there are twenty-one that fewer than fifty percent of the students answered correctly. The areas of difficulty were in the general properties of matter (item #'s 9, 11, 14, 15, 18, and 19), in combinations (item #'s 20, 21, and 22), in energy and heat (item #'s 23, 24, and 25), in electricity and magnetism (item #'s 28, 29, 30, 31, 32, and 33), and in mechanics (item #'s 35, 37, and 38).

BOSTON PUBLIC SCHOOLS

DEPARTMENT OF EDUCATIONAL TESTING

CURRICULUM REFERENCED FINAL SCIENCE - LEVEL 7

1985 - 1986

B.4	Appropriate measuring instrument & unit of measurement	1	
B.8	Measure temperature in degrees Fahrenheit & Celsius	2	
B.14	Record info. in form of sketches, graphs, charts, tables, etc.	3	
B.15)	Use and maintain laboratory equip. & safety hazards of some	4	
B.15)		5	
B.16	Major aspects in the scientific method in experiments	6	
C.1	Difference between science & technology ("pure" vs. "applied")	7	
C.12	Identify at least 10 science-related vocations & avocations	8	
F.1	Identify general properties of matter, (volume and mass)	9	
F.2	The three state of matter: solid, liquid and gas	10	
F.3	Weight of an object changes as gravity changes, mass does not	11	
F.8,10	Define an atom, what they look like, For F.10 see below	12	
F.8,9	For F.8 see above, Sketch of a helium atom, label parts	13	
F.8,9,11	For F.8,F.9 see above, Electrical charge of ea. part of atom	14	
F.10	Make a sketch of a single atom, numbering element from 1 to 20	15	
F.13	Define elements as the basic building blocks of matter	16	
F.19	Identify groups & periods on the Periodic Table	17	
F.22	Identify where metals, non-metals & inert elements are on Table	18	
F.28	Identify the peculiar behavior of water near its freezing point	19	
F.29	Distinguish between physical changes and chemical changes	20	
F.32	Identify various output from chemical interactions	21	
F.33	Principles of conservation of matter and energy	22	
F.34	Examples of different forms of energy	23	
F.35	Trace the energy in a given situation back to original source	24	
F.37	Compare & contrast temperature and heat	25	
F.40	Lines of force of two attracting & repelling magnets	26	
F.39	Identify three methods of heat transfer; give examples of each	27	
F.41	Classify materials as magnetic and non-magnetic	28	
F.43	Describe the way in which a DC electric motor works	29	
F.44	Describe the way in which a DC generator works	30	
F.45	Ways that staic charges are produced & define their polarity	31	
F.46	Recognize how objects acquire a positive or negative charge	32	
F.49	Ohm's Law; explain a simple electrical circuit carrying current	33	
F.51	Role of switches, fuses & circuit breakers in home & industry	34	
F.60	Describe machines, simple & compound, as devices	35	
F 61	Describe everyday uses of the six simple machines	36	
F.66	Define gravity, friction & inertia	37	
F.74	Describe the basic properties of sound	38	
F.78	Compare speed of sound in the air with the speed of light	39	
F.86	White light is made up of spectrum of different-colored light	40	

```
 973 SCI LEVL 7          TECK5005              11/07/86
PERCENTAGE OF CORRECT ANSWERS PER ITEM
NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY **

SCAL    1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 TOTAL

 2130  73 34 56 44 13 57 67 83 52 66 24 39 52 33 34 43 46 34 26 23 42 53 57 44 38 43 63 23 33 35 22 40 35 38 28 59 30 37 78 64 44
 2170  73 27 58 52 20 64 75 78 58 88 34 56 60 50 42 56 62 37 28 23 46 48 37 30 58 44 63 30 40 38 63 31 64 56 41 57 21 36 85 68 50
 4570  41 29 58 45 25 50 62 50 29 87  0 62 66 37 37 75 62 41  8 20 29 20 41 29 41  8 50 20 20 45 50 20 29 50 37 58 12 29 75 58 40
 2060  87 69 58 38 12 64 79 82 66 84 76 71 76 79 46 79 67 74 69 71 74 79 61 79 69 71 92 79 69 41 84 64 66 69 71 76 48 71 97 84 70
 2070  72 28 60 28  8 52 80 84 24 38  8 40 60 36 44 56 56 16 40 12 52 44 44 48 68 28 36 36 32 26 52 24 20 32 28 40 16 12 84 52 41
 2240  70 30 50 46 25 45 64 74 24 73 12 42 54 36 44 56 60 37 29 30 32 32 33 36 38 44 82 26 38 57 38 24 21 50 44 46 30 28 69 66 43
 DISA  71 35 57 45 18 56 70 77 45 78 27 50 59 44 40 57 59 39 32 29 44 47 45 42 49 43 69 33 39 42 47 34 42 49 40 56 27 36 80 66 48

 2110  79 16 44 65 51 69 82 79 65 69 59 48 59 53 53 59 61 51 44 57 48 57 48 63 57 65 85 63 34 61 55 48 48 57 51 67 34 61 73 69 58
 2120  73 37 54 60 50 56 64 73 69 79 39 64 66 58 52 71 47 45 33 26 54 58 28 49 54 37 62 30 18 43 22 28 30 49 43 41 15 13 64 64 48
 2140  84 68 72 69 60 60 76 73 56 76 32 52 72 54 52 53 60 40 42 48 40 54 52 48 62 53 78 57 54 57 64 45 54 62 68 68 49 54 82 78 59
 2200  71 28 33 38 30 40 71 73 42 57 71 45 42 83 28 54 73 46 71 38 47 47 23 33 66 28 66 33 30 35 16 59 35 33 26 66 35 26 50 42 46
 2950  83 23 63 70 26 80 73 83 63 80 56 43 56 43 50 50 50 40 36 30 30 40 40 53 50 33 50 30 36 83 40 23 30 26 43 56 23 30 80 60 49
 DISB  78 39 55 61 47 60 73 77 59 72 48 51 61 58 48 58 58 43 45 41 44 53 40 49 59 45 71 45 36 54 42 42 42 49 49 60 33 39 71 65 53

 2330  51 19 50 42 13 58 61 77 31 69  5 41 49 38 39 43 49 30 23 29 28 36 29 42 41 28 59 34 35 44 36 33 31 59 33 41 25 27 66 52 40
 2080  71 40 31 38 16 48 68 70 55 86 41 40 46 40 21 38 46 13 18 25 33 38 21 28 55 18 58 18 16 46 33 16 21 45 31 26 21 43 73 53 39
 2180  76 35 42 54 32 55 61 83 45 78 32 54 55 39 55 56 69 49 33 25 44 45 35 60 64 33 71 56 23 55 45 39 54 57 43 60 37 42 80 90 51
 2090  58 27 42 38  4 56 54 72 46 86 14 69 60 46 70 73 63 51 34 30 41 55 45 39 64 59 76 38 39 46 42 30 47 64 40 80 28 35 76 61 50
 2190  65 41 53 48 28 65 72 76 42 76 27 45 51 44 40 61 46 32 36 34 33 42 38 40 58 34 61 38 27 46 34 36 31 42 31 55 27 21 57 53 45
 2260  81 27 34 34 19 57 63 68 80 55 50 78 63 62 59 65 27 36 18 22 22 22 24 54 54 18 72 31 36 55 22 26 21 47 34 40 26 44 70 67 45
 DISC  65 30 44 44 19 57 63 76 45 75 24 52 53 43 47 55 52 36 28 28 34 40 33 45 54 33 66 38 30 48 37 32 36 54 36 51 28 34 70 63 45

 2010  88 49 65 39 41 75 61 73 57 85 39 60 72 51 52 79 73 55 36 40 50 37 43 56 62 50 65 40 31 53 68 39 82 58 36 67 41 56 87 75 57
 2040  70 11 42 58 10 48 56 58 42 74  9 55 57 40 30 50 68 43 23 18 37 26 28 27 39 26 63 29 17 29 28 21 31 26 27 39 14 20 63 61 38
 2050  83 51 56 54 19 67 76 91 67 92 51 67 71 54 65 74 75 54 35 58 61 31 72 70 62 61 78 62 41 64 66 58 51 54 45 74 31 58 89 84 62
 DISD  81 40 56 50 25 65 65 76 57 85 36 61 68 49 51 69 72 51 32 41 50 32 50 54 56 48 70 46 31 51 57 41 57 48 37 62 30 47 81 75 54

 1240  88 50 67 48 38 64 68 79 43 89 29 61 65 43 39 64 66 47 46 34 58 43 40 61 54 36 75 43 36 51 52 33 45 61 45 65 39 31 73 70 53
 2100  81 51 68 65 38 67 75 81 55 73 40 52 55 37 60 70 67 48 42 47 45 55 48 60 53 66 73 65 55 57 48 36 40 61 57 66 36 60 75 73 57
 2270  53 22 45 39 20 39 50 69 21 60 18 34 33 28 32 56 55 30 21 26 43 28 16 31 46 22 55 37 31 37 25 26 24 44 26 32 21 24 65 51 36
 2980  76 53 43 58 47 58 71 88 57 73 40 52 67 62 41 68 61 50 51 28 36 31 42 46 61 58 73 75 36 48 61 31 37 47 35 41 22 31 72 65 52
 DISE  76 45 58 52 36 58 66 79 44 76 31 52 57 43 42 64 63 44 41 34 47 40 37 51 54 44 70 53 39 48 47 32 38 54 41 53 31 35 71 66 50

 DISA  71 35 57 45 18 56 70 77 45 78 27 50 59 44 40 57 59 39 32 29 44 47 45 42 49 43 69 33 39 42 47 34 42 49 40 56 27 36 80 66 48
 DISB  78 39 55 61 47 60 73 77 59 72 48 51 61 58 48 58 58 43 45 41 44 53 40 49 59 45 71 45 36 54 42 42 42 49 49 60 33 39 71 65 53
 DISC  65 30 44 44 19 57 63 76 45 75 24 52 53 43 47 55 52 36 28 28 34 40 33 45 54 33 66 38 30 48 37 32 36 54 36 51 28 34 70 63 45
 DISD  81 40 56 50 25 65 65 76 57 85 36 61 68 49 51 69 72 51 32 41 50 32 50 54 56 48 70 46 31 51 57 41 57 48 37 62 30 47 81 75 54
 DISE  76 45 58 52 36 58 66 79 44 76 31 52 57 43 42 64 63 44 41 34 47 40 37 51 54 44 70 53 39 48 47 32 38 54 41 53 31 35 71 66 50
 STOT  73 37 52 49 27 59 67 77 49 77 31 53 59 46 46 60 60 42 34 33 43 41 40 48 54 41 68 42 34 48 45 35 42 51 40 56 29 38 74 66 49
```

SCIENCE - LEVEL 8

INSTRUMENT AND POPULATION DESCRIPTION

This is a forty-item multiple choice test measuring selected circled objectives in the curriculum strands of Experiences (1 item), Skills/Processes (3 items), Science/Society (2 items), and Life Sciences (34 items).

The population includes all students enrolled in grade 8 who took an on-level test and for whom valid answer sheets were submitted.

SYSTEM STRENGTHS AND WEAKNESSES

Overall, students performed poorly on this test with a system-wide average score of 50%. Generally, students seem to be mastering the objectives in Science Experiences and most of the objectives in Skills/Processes. In this latter domain students had difficulty with recording information in the form of sketches, graphs, etc. and in interpreting data (item # 3).

The most serious deficits as strands can be found in the domains of Science/Society and Life Sciences where of thirty-six items there are nineteen which more than fifty percent of the students are answering incorrectly. In Science/Society students are having difficulty recognizing the differences between science and technology and the impacts of recent scientific/technological advances (item #'s 5 and 6). In Life Sciences students are not mastering items addressing micro-organisms (item # 7), plants (item #'s 9 and 13), animals (item #'s 21 and 23), cell theory (item #'s 26 and 28), anatomy (item #'s 28, 29, 30, 31, and 33), classification (item # 34), evolution (item #'s 36 and 37), and heredity (item #'s 38, 39, and 40).

BOSTON PUBLIC SCHOOLS

DEPARTMENT OF EDUCATIONAL TESTING

CURRICULUM REFERENCED FINAL   SCIENCE - LEVEL 8

1985 - 1986

A.2	Field trips use to find out a great deal about one topic	1	
B.5	Measure weight in English and metric units	2	
B.13	Record info. in form of sketches, graphs, etc., interpret data	3	
B.15	Major aspects of scientific method in experiments	4	
C.1	Differences between science & technology ("pure" vs. "applied")	5	
C.4	Impact of at least 3 recent scientific/technological advances	6	
D.2	Difference between viruses & bacteria, basic characters of each	7	
D.3	4 types of protozoans, major characters & importance to humans	8	
D.5	Structural diffs. monocotyledon & dicotyledon plants	9	
D.5	Structural diffs. vascular and non-vascular plants	10	
D.8	Process of photosynthesis	11	
D.9	Identify ways in which plants & molds spread from place to place	12	
D.7	Identify structures & functions of major parts of plants	13	
D.13	Diff. between plants, animals, protists, monerans & fungi	14	
D.14	Distinguish between air- and gill-breathing animals	15	
D.15	Compare & contrast the major phyla of animal life, give example	16	
D.15		17	
D.18	Differences & similiarities between major plant & animal system	18	
D.20	Sequence of stages in growth & development of a higher insect	19	
D.21	Identify the kinds of animals that reproduce by fission	20	
D.23	Describe the function of various forms of animal behavior	21	
D.23		22	
D.24	Identify the ways a particular organism provides for its needs	23	
D.26	Recognize the cell as the basic unit of all living things	24	
D.27	Identify main parts of a typical cell as seen thru a microscope	25	
D.27	and state their functions	26	
D.27		27	
D.30	Describe the 2 kinds of cell division: mitosis & meiosis	28	
D.33	Define organism & contrast to living things that are not	29	
D.32	Identify common name of animal & plant organs	30	
D.34	Digestion, process by which plants & animals; food into chemic.	31	
D.35	What osmosis is and how it works	32	
D.38	Objects of biological origin & artifacts of slide preparation	33	
D.40	Carolus Linnaeus developed modern system of class of organisms	34	
D.43	Criterion for assignment to the same species	35	
D.50	Scientific theory of evolution	36	
D.51	Contribution of Darwin & Wallace to develop theory of evolution	37	
D.57	Contributions of Gregor Mendel to science of heredity	38	
D.60	DNA is present in the cells of all living things	39	
D.62	Sexual & asexual reproduction in plants and animals	40	

```
983 SCI LEVL 9          TECK5005             11/07/86
PERCENTAGE OF CORRECT ANSWERS PER ITEM
NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY **

SCHL    1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 TOTAL

2130   54 60 29 81 32 32 28 47 47 43 60 54 12 50 72 75 48 65 51 65 21 59 27 78 78 30 58  8 39 48 40 55 50 27 65 51 43 21 42 39 47
2170   85 85 31 85 26 63 35 52 40 62 71 44 59 81 60 77 87 82 77 64 38 68 52 70 62 28 55 10 12 47 38 49 38 10 65 29 46 30 36 22 52
4570   78 91 76 91 17 76 86 73 65 78 69 78  8 60 82 91 86 73 65 73  8 60 60 52 73 47 34 21 26 69 69 52 60 60 21 69 47 43 60 69 61
2360   96 75 46 96 28 25 46 68 78 78 78 67 65 59 81 93 90 71 58 81 53 84 71 84 81 53 75 56 56 81 68 65 34 87 96 68 87 90 46 96 70
2370   64 72 52 92 54 54 47 57 54 61 55 62 45 54 81 75 67 81 64 43 55 77 41 64 75 32 64 29 29 52 58 56 43 43 75 57 49 39 47 37 57
2240   78 66 33 92 30 50 31 54 69 62 74 60 39 46 65 65 62 78 81 46 24 69 21 74 66 54 60 25 28 48 53 60 54 42 77 39 48 62 40 36 54
DISA   78 73 40 89 36 51 40 55 53 60 65 56 41 60 72 76 70 77 68 57 37 70 41 71 71 36 59 21 28 52 50 55 45 35 70 47 49 40 43 39 54

2110   88 86 73 86 65 72 54 56 56 70 61 61 59 47 81 72 63 75 70 63 70 65 52 52 52 36 47 29 43 61 72 56 63 45 75 54 50 50 61 45 61
2120   79 73  9 85 14 47 20 50 55 60 65 52  9 49 63 69 42 50 66 52 65 68 12 69 79 36 52 17 19 53 36 63 50 60 57 44 46 20 33 38 48
2140   66 70 34 86 48 53 28 67 47 46 57 55 28 46 71 65 51 82 49 49 34 74 24 69 74 29 58 27 30 52 44 57 39 29 72 46 37 29 30 27 49
2200   64 64 33 75 37 29 38 59 46 55 24 40 22 35 75 59 37 66 55 55 16 50 24 68 44 40 57  3 14 29 31 44 53 18 55 29 38 29 18 25 41
2950   76 71 21 83 29 48 20 68 47 37 33 33 16 45 51 58 54 68 45 43 29 54 19 68 56 27 43 17 23 35 33 52 43 19 66 45 25 30 31 25 42
DISB   74 72 29 83 36 49 28 63 49 48 45 45 23 45 64 63 50 70 53 49 38 62 23 67 62 31 50 19 25 44 40 54 46 30 66 44 36 30 32 30 47

2330   42 50 22 79 27 23 23 47 30 46 51 40 19 41 55 55 57 63 51 49 27 46 33 69 58 28 59  6 15 37 30 48 48 26 67 34 27 20 26 21 40
2080   19 45 23 82 32 45  6 42 27 39 46 47  5 21 61 60 68 64 41 72 27 45 28 82 67 38 46 24 17 30 49 52 34 60 82 35 24 27 27 23 41
2180   62 61 20 85 33 49 27 58 63 57 59 50 36 69 75 64 67 74 54 52 17 59 49 62 70 42 67  6 34 62 49 61 54 41 45 47 43 43 36 34 51
2090   41 73 22 89 30 34 16 52 38 40 58 37 16 46 66 85 70 65 61 50 33 67 41 74 66 37 62 12 24 42 46 62 34 31 83 35 38 33 27 40 47
2190   68 73 43 80 42 48 19 54 62 64 62 44 29 55 68 72 75 65 66 40 41 66 28 74 66 38 49 43 25 40 57 60 60 37 74 43 40 35 40 35 52
2260   72 59 16 76 32 45 25 71 20 37 62 47 16 59 52 64 30 64 45 38 35 71 20 72 69 66 61  8 18 44 62 55 57 49 88 42 16 27 33 55 47
DISC   51 60 24 82 32 38 20 53 42 49 56 44 22 49 63 65 63 66 54 50 29 57 35 71 65 38 58 15 23 43 45 56 49 37 69 39 33 31 31 32 46

2010   52 69 38 87 44 40 22 74 46 49 54 48 49 58 81 65 65 77 65 39 38 54 54 65 83 61 70 39 37 54 54 61 64 59 79 41 66 56 49 44 56
2040   81 81 64 86 57 64 46 72 54 55 74 66 53 69 80 74 71 80 65 62 59 65 52 65 60 41 58 22 32 58 48 55 44 43 68 49 47 43 57 55 59
2050   61 87 58 93 47 72 24 46 58 50 50 69 28 71 84 83 82 79 68 52 69 60 47 78 76 41 57  6 43 46 68 65 45 63 43 57 47 31 63 32 58
DISD   65 78 53 88 50 57 32 66 52 51 61 60 45 65 81 73 71 79 66 51 54 59 52 68 72 48 62 25 36 54 55 60 52 54 66 48 54 45 55 45 58

1240   56 67 26 83 20 55 44 72 46 45 62 53 41 58 70 68 48 70 58 60 45 65 37 69 60 23 56 21 27 52 53 45 48 29 78 44 48 40 35 43 50
2100   76 72 45 85 50 40 28 64 39 47 49 48 23 45 64 72 57 59 47 46 43 59 42 70 52 47 58 21 26 50 51 50 47 24 63 36 32 27 36 45 48
2270   48 48 14 75 31 39 16 50 48 27 37 35 20 31 66 66 47 70 51 39 16 50 36 47 51 20 48 16 24 22 36 39 35 27 54 37 21 25 18 22 37
2980   94 61 32 83 54 45 34 56 43 43 63 54 61 70 85 80 65 81 58 34 61 69 32 61 50 32 38 10 23 65 43 50 60 41 74 56 52 49 50 40 54
DISE   66 63 29 82 35 46 32 63 44 41 54 48 35 50 70 70 52 69 53 48 41 61 37 63 54 30 52 18 25 47 47 46 47 29 68 42 39 35 34 39 48

DISA   78 73 40 89 36 51 40 55 53 60 65 56 41 60 72 76 70 77 68 57 37 70 41 71 71 36 59 21 28 52 50 55 45 35 70 47 49 40 43 39 54
DISB   74 72 29 83 36 49 28 63 49 48 45 45 23 45 64 63 50 70 53 49 38 62 23 67 62 31 50 19 25 44 40 54 46 30 66 44 36 30 32 30 47
DISC   51 60 24 82 32 38 20 53 42 49 56 44 22 49 63 65 63 66 54 50 29 57 35 71 65 38 58 15 23 43 45 56 49 37 69 39 33 31 31 32 46
DISD   65 78 53 88 50 57 32 66 52 51 61 60 45 65 81 73 71 79 66 51 54 59 52 68 72 48 62 25 36 54 55 60 52 54 66 48 54 45 55 45 58
DISE   66 63 29 82 35 46 32 63 44 41 54 48 35 50 70 70 52 69 53 48 41 61 37 63 54 30 52 18 25 47 47 46 47 29 68 42 39 35 34 39 48
STOT   65 68 33 84 37 47 29 58 47 50 56 50 31 53 69 69 62 71 58 51 37 61 37 68 65 36 56 19 27 47 47 54 48 36 68 43 41 35 38 36 50
```

HIGH SCHOOL SCIENCE

EARTH SCIENCE

INSTRUMENT AND POPULATION DESCRIPTION

This is a forty-item multiple choice test measuring selected circled objectives in the curriculum strands of Astronomy (12 items), Geology (17 items), Meteorology (7 items), and Oceanography (4 items).

The population includes all high school students (with the exception of the exam schools) who took an Earth Science course and for whom valid answer sheets were submitted.

SYSTEM STRENGTHS AND WEAKNESSES

Overall, students performed very poorly on this test with a system-wide average score of 49%. Generally, students are performing moderately well in the domain of Astronomy, although they did not do well on isolated objectives. Items tapping knowledge of the solar system (item #'s 5 and 7) and earth in space (item #'s 10 and 12) were not mastered.

Performance in the domains of Geology, Meteorology, and Oceanography was poor across most items. In Geology of seventeen items there were thirteen that more than fifty percent of the students answered incorrectly. In Meterology four of the seven items and in Oceanography all four items were answered incorrectly by more than fifty percent of the students.

BOSTON PUBLIC SCHOOLS

DEPARTMENT OF EDUCATIONAL TESTING

CURRICULUM REFERENCED FINAL EARTH SCIENCE

1985 - 1986

I.A.8	Describe the monthly changes in the appearance of the moon	1
I.C.1	Members of the universe by their characteristics; stars	2
I.A.9	Describe the observed daily motion of the sun	3
I.C.10	Knowing novas suddenly become much brighter and then fade	4
I.D.4	Knowing the most massive object is the sun & planet: Jupiter	5
I.D.6	Contrast the small & large planets with respect to character	6
I.D.8	Astronomical objects/meaning of rotation and revolution	7
I.E.5	Applying Newton's Law of Gravitation qualitatively	8
I.F.4	Relate the seasons to the earth's axis & plane of revolution	9
I.F.7	Eclipse of the moon	10
I.G.2	Understand the escape velocity from a heavenly body	11
I.F.9	Knowing the moon makes a revolution in 1 month around earth	12
II.H.3	Difference among atoms of diff. elements by atomic structure	13
II.H.5	Diff. between compounds & mixture by atomic-molecular theory	14
II.H.8	Identify physical properties & relate to atomic-mole theory	15
II.H.12	Knowing the chemical symbols of ten elements	16
II.H.15	Measure volume & mass of substance & compute density(d=m/v)	17
II.I.1	Identify the origins of the 3 major types of rock	18
II.I.4	Identify specimens of sedimentary rocks by their characters	19
II.I.7	Describe the characteristics of some metamorphic rocks	20
II.J.5	Explain concepts "young river" & "mature river"	21
II.J.2	Describe the effects of frost, humidity on weathering	22
II.J.8	Define the terms aquifer and water table	23
II.J.16	Describe typical features of a glacier-eroded landscape	24
II.K.2	Knowing the interior layers of the earth	25
II.K.3	Knowledge of compressional and shear waves	26
II.L.1	Define the major terms associated with mountain building	27
II.M.7	Distinguishing among the divisions of geologic time scale	28
II.M.9	Identify the life forms prevalent in 4 geologic eras	29
III.N.1	Knowing that meteorology is the study of weather	30
III.N.2	Identify the layers of the atmosphere	31
III.N.4	Knowing the gases that make up the atmosphere	32
III.N.9	Define radiation, conduction, convection and absorption	33
III.O.4	Interpreting the symbols on a weather map	34
III.P.11	Define cold front, warm front, stationary front	35
III.P.15	Know that rain-producing clouds have the letters nimb	36
IV.R.2	Name the components of the hydrosphere	37
IV.T.9	Explain the causes of neap tides; spring tides	38
IV.V.6	Name sources of atmospheric pollution in metro Boston	39
IV.W.12	Identify renewable and nonrenewable sources of energy	40

```
 550 EARTH SCI          TECR5005            11/07/66
PERCENTAGE OF CORRECT ANSWERS PER ITEM
NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY **

SCHL     1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 TOTAL

 1040   27 77 67 50 36 87 41 51 82 29 62 31 50 51 34 34 36 36 31 32 36 55 37 39 25 50 36 10 34 62 41 36 65 58 44 41 36 34 22 25 43
 1110   52 91 85 59 74 80 38 53 81 47 61 46 42 15 23 71 46 53 43 30 34 41 30 63 46 42 29 17 45 53 36 47 70 59 24 32 26 33 15 40 47
 2240   ** ** ** ** ** ** ** ** ** ** **  0 **  0  0  0  0  0 ** ** ** ** ** ** ** ** ** ** ** ** **  0  0 ** **  0 **  0 ** ** 75
 DISA   44 86 79 56 61 83 40 52 81 41 61 40 45 27 27 58 42 47 39 31 35 46 33 55 40 45 31 15 41 56 38 43 68 59 31 35 30 33 18 36 46

 1250   45 89 69 46 37 70 34 57 87 37 65 44 48 17 23 69 29 40 37 31 29 40 45 48 44 35 25 31 45 74 35 37 69 49 29 48 33 20 23 38 44
 1100   68 89 62 31 35 63 34 49 86 39 59 35 40 20 36 50 27 29 29 30 31 33 35 49 51 36 38 25 38 57 27 30 68 55 23 36 46 40 29 30 42
 DISB   53 89 67 40 36 67 34 54 87 38 62 40 45 18 27 62 28 36 34 31 30 38 41 48 46 35 29 29 42 68 32 34 68 51 27 44 38 27 25 35 43

 1060   38 74 60 34 33 76 41 44 73 39 53 44 47 31 33 34 38 34 30 31 34 53 49 36 28 46 28 25 42 52 39 23 74 55 31 44 39 31 17 26 42
 1120   29 83 59 41 25 63 37 45 65 36 44 38 41 26 20 27 33 43 25 33 26 40 30 47 36 43 26 16 30 72 31 16 65 62 33 16 26 25 19 27 37
 1160   49 81 64 53 58 69 22 58 88 50 57 46 46 32 29 77 33 41 44 61 42 53 57 50 40 24 46  9 45 64 21 37 68 46 34 46 33 30 14 42 46
 DISC   39 80 61 43 39 69 33 50 75 42 51 43 45 30 27 47 34 40 33 42 34 49 45 45 35 37 34 16 39 63 30 26 69 54 33 35 32 29 17 32 42

 1050   50 84 69 41 37 71 32 60 73 40 54 44 58 30 64 62 33 53 50 48 39 58 53 54 42 58 37 39 52 66 44 36 68 63 37 61 58 39 50 50 51
 1070   25 86 48 37 24 77 32 41 71 37 64 40 24 42 59 60 49 44 32 45 36 40 53 63 35 47 37 34 50 77 35 30 49 71 33 57 59 30 19 60 46
 DISD   36 85 57 39 30 74 32 49 72 38 60 42 39 37 61 61 42 48 40 46 37 48 53 59 38 52 37 36 51 72 39 32 57 67 34 59 59 34 32 56 49

 1080   68 90 80 77 54 91 69 68 77 62 67 65 64 32 55 81 53 66 60 49 25 68 41 46 45 34 32 30 47 72 41 46 77 48 37 52 54 48 42 42 56
 1190   35 80 52 34 54 77 51 62 70 41 52 28 53 34 19 46 26 29 35 47 19 40 57 54 45 39 34 27 34 62 38 43 51 57 30 34 31 24 25 29 42
 1210   50 82 68 53 59 82 57 73 72 50 59 27 50 28 53 67 32 40 45 31 46 46 31 44 37 35 25 40 39 64 41 40 69 63 32 41 42 36 20 28 47
 1240   84 87 89 70 86 92 71 75 92 73 55 74 65 44 57 79 65 73 57 49 59 53 61 61 57 68 56 54 68 90 50 60 77 92 61 66 45 50 68 69 67
 DISF   63 86 75 65 61 87 64 69 78 59 61 53 60 34 50 73 47 57 53 45 35 57 44 49 45 41 35 36 47 72 42 47 72 60 39 50 47 43 39 42 54

 DISA   44 86 79 56 61 83 40 52 81 41 61 40 45 27 27 58 42 47 39 31 35 46 33 55 40 45 31 15 41 56 38 43 68 59 31 35 30 33 18 36 46
 DISB   53 89 67 40 36 67 34 54 87 38 62 40 45 18 27 62 28 36 34 31 30 38 41 48 46 35 29 29 42 68 32 34 68 51 27 44 38 27 25 35 43
 DISC   39 80 61 43 39 69 33 50 75 42 51 43 45 30 27 47 34 40 33 42 34 49 45 45 35 37 34 16 39 63 30 26 69 54 33 35 32 29 17 32 42
 DISD   36 85 57 39 30 74 32 49 72 38 60 42 39 37 61 61 42 48 40 46 37 48 53 59 38 52 37 36 51 72 39 32 57 67 34 59 59 34 32 56 49
 DISF   63 86 75 65 61 87 64 69 78 59 61 53 60 34 50 73 47 57 53 45 35 57 44 49 45 41 35 36 47 72 42 47 72 60 39 50 47 43 39 42 54
 STOT   51 86 69 52 48 79 47 59 78 47 60 46 50 31 44 64 41 48 43 41 34 50 45 51 42 42 34 31 45 69 38 39 67 59 35 47 44 36 31 42 49
```

PHYSICAL SCIENCE

INSTRUMENT AND POPULATION DESCRIPTION

This is a forty-item multiple choice test measuring selected circled objectives in the curriculum strands of Measurement (1 item), Motion (1 item), Forces (3 items), Work/Energy (3 items), Energy/Waves (5 items), Energy/Matter/Heat (8 items), Chemical Change (6 items), Electricity/Water (3 items), Electricity/Magnetism (3 items), Electricity/Light (2 items), Special Relativity (1 item), and Nucleus (4 items).

The population includes all high school students (with the exception of the exam schools) who took a Physical Science course and for whom valid answer sheets were submitted.

SYSTEM STRENGTHS AND WEAKNESSES

Overall, students performed very poorly on this test with a system-wide average score of 42%. There are a total of twenty-eight items on the test which fewer than fifty percent of the students answered correctly and all domains have significant numbers of items that are not being mastered.

BOSTON PUBLIC SCHOOLS

DEPARTMENT OF EDUCATIONAL TESTING

CURRICULUM REFERENCED FINAL PHYSICAL SCIENCE

1985 - 1986

C.3,4	English and S1 units of measure, convert English to S1 unit	1	
D.16	Determine acceleration of falling dense objects	2	
E.7	Distinguish between weight and mass	3	
E.17	Centripetal force used to keep objects in orbit is gravity	4	
E.24	State Newton's third law of motion	5	
F.1	Define work as W = F x d	6	
F.4	Work, potential energy & kinectic energy can be transformed	7	
F.11	Power is work per unit & horsepwr & watt are units of power	8	
G.2	Produce & describe waves in strings, slinkies & water	9	
G.4	The period, frequency, velocity & amplitude of a wave	10	
G.5	Relate the velocity of a wave to frequency & wavelength	11	
G.28	Describe the path of light thru lenses of varying shapes	12	
G.24	Recognize that color is related to frequency	13	
H.4	Law of conservation of energy	14	
H.3	Define heat as a form of energy that changes temperature	15	
H.7	Define the unit of heat as the calorie	16	
H.15	Materials can exist as solids, liquids & gases & change	17	
H.11	Define density as Mass/Volume & way to ident substances	18	
H.25,26	Understanding atmospheric pressure	19	
H.19	The operation of a hot air balloon	20	
H.32	Workings of a refrigerator	21	
I.3	Different elements have different physical properties	22	
I.13	Equal volumes of different gases equal nos. of particles	23	
I.25	Writing and balancing chemical equations	24	
I.33	Major components of the atmosphere	25	
I.43	Know that H_2CO_3 is a component of tonics	26	
I.50	When acids & bases are mixed, they neutralize to water;salt	27	
J.3	Matter is composed of + & - charges	28	
J.24	Relate the atomic no. to the no. of positive charges;nucleus	29	
J.29	Distinguish between ionic & covalent bonds; use atom model	30	
K.1	Passage of electricity through a conductor	31	
K.13	Recognize that a moving charge produces a magnetic field	32	
K.7	Distinguish between simple series & parallel circuits	33	
L.4	Light is produced by electrons change energy levels in atoms	34	
M.1	Speed of light in a vacuum is a constant	35	
L.11	Describe the complete electro-magnetic spectrum	36	
N.1	Nucleus of an atom of atomic number 10 & mass 20 AMU	37	
N.2	Isotopes of an element are atoms w/same no. of protons	38	
N.13	Define fission	39	
N.13		40	

```
 555 PHYS SCI           TECR5005            11/07/86
PERCENTAGE OF CORRECT ANSWERS PER ITEM
NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY **

SCHL     1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 TOTAL

 1040   75 39 64 39 35 25 42 25 64 96 10 28 32 35 67 21 60 21 14 53 25 46 46 35 21 32 25 25 42 32 25 14 50 25 39 35 39  7 39  7 36
 1110   81 25 43 81 87 43 62 68 62 87 43 43 68 75 87 68 68 31 25 68 18 68 50 25 62 37 50  6 50 18 31 25 68 25 25 68 50 43 50  0 50
 DISA   77 34 56 54 54 31 50 40 63 93 22 34 45 50 75 38 63 25 18 59 22 54 47 31 36 34 34 18 45 27 27 18 56 25 34 47 43 20 43  4 41

 1250   54 13 40 72 50 45 50 45 54 59 27 36 22 36 68 45 63 45 22 40 36 54 36 18 22 50 31  9 22 40 22 22 50 18 22 27 31 31 50 18 37
 DISB   54 13 40 72 50 45 50 45 54 59 27 36 22 36 68 45 63 45 22 40 36 54 36 18 22 50 31  9 22 40 22 22 50 18 22 27 31 31 50 18 37

 1060   73 16 40 63 20 33 60 33 36 63 16 20 16 33 60 53 43 36  3 40 30 30 20 16 26 26 53 10 10 36 23 23 53 40 36 40 23 26 33 16 33
 DISC   73 16 40 63 20 33 60 33 36 63 16 20 16 33 60 53 43 36  3 40 30 30 20 16 26 26 53 10 10 36 23 23 53 40 36 40 23 26 33 16 33

 1070    0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0 **  0 **  0  0  0  0  0 **  0  0  0  0  0  0  0  7
 DISD    0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0 **  0 **  0  0  0  0  0 **  0  0  0  0  0  0  0  7

 1190   77 44 55 67 53 69 56 40 49 79 22 58 50 63 68 46 64 36 29 46 41 48 44 24 37 46 60 51 41 41 40 15 58 11 22 63 45 31 50 17 46
 1210   76 24 68 74 56 48 48 54 48 74 24 36 34 40 62 44 54 48 40 42 38 48 34 30 30 34 60 26 34 54 44 46 60 42 38 64 42 24 50 40 45
 DISF   76 36 60 69 54 61 53 45 48 77 23 49 44 54 65 45 60 41 33 44 40 48 40 26 34 41 60 41 38 46 41 27 58 23 28 63 44 28 50 26 46

 DISA   77 34 56 54 54 31 50 40 63 93 22 34 45 50 75 38 63 25 18 59 22 54 47 31 36 34 34 18 45 27 27 18 56 25 34 47 43 20 43  4 41
 DISB   54 13 40 72 50 45 50 45 54 59 27 36 22 36 68 45 63 45 22 40 36 54 36 18 22 50 31  9 22 40 22 22 50 18 22 27 31 31 50 18 37
 DISC   73 16 40 63 20 33 60 33 36 63 16 20 16 33 60 53 43 36  3 40 30 30 20 16 26 26 53 10 10 36 23 23 53 40 36 40 23 26 33 16 33
 DISD    0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0 **  0 **  0  0  0  0  0 **  0  0  0  0  0  0  0  7
 DISF   76 36 60 69 54 61 53 45 48 77 23 49 44 54 65 45 60 41 33 44 40 48 40 26 34 41 60 41 38 46 41 27 58 23 28 63 44 28 50 26 46
 SIOT   73 30 54 65 49 50 53 42 50 76 22 41 38 48 66 45 58 37 25 46 34 47 38 25 33 38 51 29 34 40 34 24 57 25 30 53 39 26 46 19 42
```

BIOLOGY

INSTRUMENT AND POPULATION DESCRIPTION

This is a forty-item multiple choice test measuring the circled objectives in the curriculum strands of Biology/Study of Living Things (11 items), Continuity of Life (5 items), Microbiology (3 items), Animal Kingdom (16 items), and Plant Kingdom (5 items).

The population includes all high school students (with the exception of the exam schools) who took a Biology course and for whom valid answer sheets were turned in.

SYSTEM STRENGTHS AND WEAKNESSES

Overall, students performed poorly on this test with a system-wide average score of 55%. Generally, students performed fairly well on the items in the Animal Kingdom domain, although they had difficulty with one item on invertebrates (item # 28) and two items on vertebrates (item #'s 33 and 34).

In the remainder of the domains out of twenty-four items there were twelve which fewer than fifty percent of the students answered correctly. In Biology/Study of Living Things the difficulty was with characteristics of living things (item #'s 4, 6, 8, 10, and 11). In the Continuity of Life domain students had difficulty with the items that tapped the inheritance of traits (item #'s 12 and 13). In Microbiology the two items identified had to do with monera (item #'s 17 and 18). Within the Plant Kingdom domain students had difficulty with the items that tapped the structure and function of a seed plant and plant reproduction (item #'s 36, 37, and 40).

BOSTON PUBLIC SCHOOLS

DEPARTMENT OF EDUCATIONAL TESTING

CURRICULUM REFERENCED FINAL **BIOLOGY**

1985 - 1986

I.A.1	Describing the scientific method	1	
I.A.5	Identify parts & functions of a light microscope	2	
I.B.4	Importance of chemical element carbon; define organic compnts	3	
I.B.7	Basic principles of the cell theory	4	
I.B.8	Major structural cell components seen thru light microscope	5	
I.B.8		6	
I.B.10	Similarities & differences between animal & plant cells	7	
I.B.10		8	
I.B.13	Function of amino acids in construction of proteins	9	
I.B.19	Major structural differences between RNA and DNA	10	
I.B.37	Stages of mitosis and meiosis in their correct sequence	11	
II.A.4	Mendelian inheritance scheme; trace a single trait	12	
II.A.8	What is meant by "sex-linked traits"	13	
II.D.1	Contributions Karl von Linne made to classification organisms	14	
II.D.3	Define "binomial nomenclature"	15	
II.D.4	Enumerate main levels classification from species to kingdom	16	
III.A.1	Describe some of the important characteristics of monera	17	
III.A.4	Distinguish three general shapes of bacteria	18	
III.B.1	Describe the structure of a typical protozoan cell	19	
IV.A.1	Radial structural symmetry	20	
IV.A.6	Understand what is meant by "regeneration" in invertebrates	21	
IV.A.15	Recognize the different parts of an earthworm	22	
IV.A.15		23	
IV.A.18	Industrial importance of mollusk aquaculture; food	24	
IV.A.20	Familiar with animals belonging to phylum Echinodermata	25	
IV.A.26	Disease carriers and how insects contribute to human disease	26	
IV.A.24	Major characteristics of the class Insecta	27	
IV.A.27	Describe & identify the main parts & organs of grasshoppers	28	
IV.A.28	Concept of complete and incomplete metamorphosis	29	
IV.A.30	Being familiar with the class Arachnida	30	
IV.B.1	Characteristics of vertebrates & typical vertebrate body plan	31	
IV.B.6	Characteristics of animals belonging to the class Amphibia	32	
IV.B.7	External & internal structure of larval & mature amphibians	33	
IV.B.10	Mesozoic Era is referred to as the "Age of the Reptiles"	34	
IV.B.20	Discuss the characteristics of mammals	35	
V.B.2	Compare characteristics of gymnosperms & angiosperms	36	
V.B.5	Describe the function & structure of xylem & phloem	37	
V.C.6	Major differences between photosynthesis & respiration	38	
V.C.12	Describe different types of tropism	39	
V.D.1	Parts of a flowering plant & the function of each part	40	

```
 510 BIOLOGY              TECR5005              11/07/86
PERCENTAGE OF CORRECT ANSWERS PER ITEM
NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY **

SCHL    1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 TOTAL

 1340  63 92 62 57 51 20 87 42 60 31 63 23  3 46 60 61 34 44 64 64 71 53 59 53 43 54 51 31 72 67 77 57 54 44 62 52 55 50 76 52 54
 1110  80 63 54 35 74 40 92 37 75 52 32 67 47 61 75 67 42 49 64 63 73 71 76 46 56 67 63 47 72 72 70 66 60 75 67 53 63 43 75 82 62
 DISA  72 76 58 45 63 31 90 39 68 43 46 47 27 54 68 64 38 46 64 64 72 63 68 49 50 61 58 40 72 69 73 62 57 61 65 53 60 46 76 68 58

 1250  78 69 58 39 32 21 83 33 58 38 40 47 14 52 54 32 24 42 56 50 67 46 60 52 34 53 45 31 55 60 70 63 32 39 53 40 43 54 75 38 48
 1100  54 71 57 29 42 32 82 34 46 19 21 34  3 36 39 48 15 24 60 62 79 72 58 57 50 32 39 39 63 60 69 56 53 57 46 51 58 46 78 36 48
 DISB  69 70 58 35 36 25 82 34 53 31 33 42 10 46 48 38 21 36 57 54 71 55 59 54 40 45 43 34 58 60 69 61 39 46 50 44 49 51 76 38 48

 1360  80 80 79 26 66 60 86 58 70 67 52 58 50 67 80 69 54 69 72 67 75 67 73 38 64 61 70 63 75 83 75 66 63 63 70 48 60 66 82 66 66
 1120  56 72 47 21 49 21 76 24 66 38 17 31  3 43 33 47 24 24 53 56 50 33 36 43 34 50 49 18 67 54 69 50 12 27 53 40 20 40 80 29 41
 1160  59 54 42 22 51 30 74 28 66 30 33 30  6 37 50 48 27 34 45 56 65 28 46 50 40 45 54 31 59 63 71 56 25 34 56 18 37 59 72 27 44
 DISC  64 69 55 23 55 35 78 36 67 44 32 39 18 48 52 54 34 40 56 59 62 42 50 43 45 52 57 35 67 66 71 56 31 40 59 36 37 53 78 39 49

 1050  61 78 61 42 67 40 83 40 66 56 41 43 26 48 54 50 27 40 65 59 59 38 55 42 55 49 51 40 62 69 72 54 36 45 60 52 55 57 74 37 53
 1070  74 79 68 32 55 42 87 30 66 54 47 47 38 40 60 50 30 33 64 53 41 51 57 57 50 38 49 41 57 60 76 50 34 26 48 35 36 56 72 41 50
 DISD  67 78 64 37 62 41 85 36 66 55 44 45 31 45 57 50 28 37 64 56 51 44 56 49 52 44 50 40 60 65 74 52 35 36 54 44 46 56 73 39 52

 1080  85 77 71 46 66 43 38 60 70 48 42 60 48 58 65 43 41 64 62 64 67 63 52 49 55 62 71 44 55 63 74 59 54 46 54 49 40 59 81 46 59
 1190  70 68 72 60 80 52 94 72 86 78 56 58 23 72 84 76 43 56 74 82 76 66 92 86 70 74 74 60 52 80 92 62 41 41 54 84 64 66 90 58 68
 1210  80 85 77 39 56 50 89 43 75 58 50 58 22 59 63 53 32 60 79 73 78 68 57 64 65 70 58 61 66 79 77 60 50 49 70 60 56 63 77 54 62
 1240  79 85 62 43 75 58 95 50 79 62 69 62 29 69 77 53 48 55 71 68 66 39 52 77 63 68 68 42 67 68 87 65 61 47 65 41 49 65 80 22 62
 DISE  81 81 71 44 65 49 90 53 75 57 51 60 33 62 68 51 40 60 71 70 71 60 57 63 61 67 66 51 61 71 79 61 53 47 62 54 49 62 80 45 61

 DISA  72 76 58 45 63 31 90 39 68 43 46 47 27 54 68 64 38 46 64 64 72 63 68 49 50 61 58 40 72 69 73 62 57 61 65 53 60 46 76 68 58
 DISB  69 70 58 35 36 25 82 34 53 31 33 42 10 46 48 38 21 36 57 54 71 55 59 54 40 45 43 34 58 60 69 61 39 46 50 44 49 51 76 38 48
 DISC  64 69 55 23 55 35 78 36 67 44 32 39 18 48 52 54 34 40 56 59 62 42 50 43 45 52 57 35 67 66 71 56 31 40 59 36 37 53 78 39 49
 DISD  67 78 64 37 62 41 85 36 66 55 44 45 31 45 57 50 28 37 64 56 51 44 56 49 52 44 50 40 60 65 74 52 35 36 54 44 46 56 73 39 52
 DISE  81 81 71 44 65 49 90 53 75 57 51 60 33 62 68 51 40 60 71 70 71 60 57 63 61 67 66 51 61 71 79 61 53 47 62 54 49 62 80 45 61
 STOT  72 76 63 38 57 39 86 42 67 48 43 49 25 52 60 50 32 46 64 62 66 54 58 54 52 55 56 42 62 67 74 58 44 45 58 47 48 56 77 44 55
```

MARINE SCIENCE

INSTRUMENT AND POPULATION DESCRIPTION

This is a forty-item multiple choice test measuring the circled objectives in the curriculum strands of General Characteristics of the Marine Environment (6 items), Composition of the Seas (4 items), Properties/Motion of the Seas (16 items), Interactions (3 items), and Life in the Sea (11 items).

The population includes all high school students (with the exception of the exam schools) who took a Marine Science course and for whom valid answer sheets were submitted. It should be noted that this course is only offered at a few high schools and the data included is only for Districts A and C.

SYSTEM STRENGTHS AND WEAKNESSES

Overall, students performed very poorly on this test with a system-wide average score of 40%. There are a total of twenty-nine items which fewer than fifty percent of the students answered correctly and all domains have significant numbers of items that are not being mastered.

BOSTON PUBLIC SCHOOLS

DEPARTMENT OF EDUCATIONAL TESTING

CURRICULUM REFERENCED FINAL **MARINE SCIENCE**

1985 - 1986

I.1	Dimensions of earth, moon and sun are very different	1
I.3	Distances between earth & moon & between earth & sun	2
I.11	Oceans cover about 4/5 of the earth's surface	3
I.20	Principal difference between seawater & fresh water	4
I.22	Volumes of seawater, ice & fresh water on the globe	5
I.27	Familiar with a few nautical terms	6
II.1	Oceans contain varied assortment of nonliving & living substance	7
II.3	Seawater is a solution containing many different solutes	8
II.4	Chemical elements that are found dissolved in seawater	9
II.16	Living organisms when they die are decomposed by chain of organ.	10
III.A.1	Properties of the ocean are determined by properties of water	11
III.A.2	Chemical & physical properties of water	12
III.A.6	Light travels faster & sound more slowly in air than in water	13
III.A.7	Depending on turbidity of water, light reaches diff. depths	14
III.A.9	Coastal waters are usually more turbid than ocean waters	15
III.A.14	Define Centigrade, Fahrenheit & Kelvin temps & a calorie	16
III.A.18	Heat capacity of water plays a vital role in earth's climate	17
III.A.24	Aqueous salt solution freezes at lower temp. than pure water	18
III.A.35	Define atmospheric pressure & how much is at sea level	19
III.A.36	Pressure on a body as it descends into the ocean	20
III.B.2	Waves are the most readily observable marine phenomenon	21
III.B.5	Understand that waves transmit energy rather than mass	22
III.B.13	Tsunamis has lengths of 150-1000 km, speed up to 800 km/hr	23
III.B.15	Tides are the most precisely predictable marine events	24
III.B.20	Diurnal tides and where they occur	25
III.B.23	Effects the Gulf Stream & Humboldt Current have upon climate	26
IV.A.8	Fossils & other remains of marine organisms are found in rock	27
IV.B.3	Seas play an important part in the hydrologic cycle	28
IV.B.5	1/3 third more water falls on land than evaporates from it	29
V.A.1	Class of chemical compounds, the proteins, unique of live organ.	30
V.A.7	Believed by many that life originated in the seas	31
V.A.10	Seawater contains a supply of compounds that are nutrients	32
V.B.1	Plants need sunlight to sustain their growth & development	33
V.B.6	Greater environmental stability of oceans; more animals live in	34
V.B.8	Gravity of most organisms on land is many times their environ.	35
V.C.3	Marine plants provide lge. part of world's atomspheric oxygen	36
V.C.10	Marine animals are the consumers in the sea	37
V.C.11	Energy requirements of marine animals	38
V.C.15	Faster-moving bilaterally symmetrical animals mouths in head	39
V.C.17	Mechanism of jet propulsion that animals use to propel themselve	40

```
 556 MARINE SCI        TECK5005           11/07/86
PERCENTAGE OF CORRECT ANSWERS PER ITEM
NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY **

SCHL     1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 TOTAL

 1040   60 35 60 30 10 75 85 40 75 40 30 30 35 20 40 55 35 20 30 55 35 50 65 50 60 25 50 20 45 40 30 60 50 20 55 55 80 30 35 65 44
 DISA   60 35 60 30 10 75 85 40 75 40 30 30 35 20 40 55 35 20 30 55 35 50 65 50 60 25 50 20 45 40 30 60 50 20 55 55 80 30 35 65 44

 1160   26 35 65 43 13 55 90 30 58 28 56 26 21 48 55 25 30 43 23 28 45 58 28 56 13 35 58 33  8 42 23 42 50 23 37 42 36 23 48 65 39
 DISC   26 35 65 43 13 55 90 30 58 28 56 26 21 48 55 25 30 43 23 28 45 58 28 56 13 35 58 33  8 42 23 42 50 23 37 42 36 23 48 65 39

 DISA   60 35 60 30 10 75 85 40 75 40 30 30 35 20 40 55 35 20 30 55 35 50 65 50 60 25 50 20 45 40 30 60 50 20 55 55 80 30 35 65 44
 DISB
 DISC   26 35 65 43 13 55 90 30 58 28 56 26 21 48 55 25 30 43 23 28 45 58 28 56 13 35 58 33  8 42 23 42 50 23 37 42 36 23 48 65 39
 DISD
 DISE
 STUT   33 35 64 41 13 59 89 32 62 31 51 27 24 43 52 31 31 39 25 34 43 57 36 55 23 33 57 31 16 42 25 46 50 23 41 45 45 25 46 65 40
```

CHEMISTRY

INSTRUMENT AND POPULATION

This is a forty-item multiple choice test measuring selected circled objectives in the curriculum strands of Overview (3 items), Atomic Theory (8 items), Periodic Table (5 items), Atomic Structure/Nucleus (2 items), Atomic Structure/Electrons (7 items), Gases (4 items), Phases/Phase Transitions (1 item), Solutions (1 item), Stoichiometry (1 item), Kinetics (1 item), Acids/Bases/Ionic Solutions (3 items), and Electrochemistry (4 items).

The population includes all high school students (with the exception of the exam schools) who took a Chemistry course and for whom valid answer sheets were submitted.

SYSTEM STRENGTHS AND WEAKNESSES

Overall, students performed poorly on this test with a system-wide average score of 56%. Generally, students performed fairly well on the domains of Atomic Theory, and Solutions, and most of the items in Overview, Periodic Table, Atomic Structure/Nucleus, Atomic Structure/Electrons, Gases, Phases/Phase Transitions, Stoichiometry, and Kinetics.

Of the seven items in the remaining two domains, there were five items that fewer than fifty percent of the students answered correctly. In Acids/Bases/Ionic Solutions students had difficulty defining pH (item # 33) and knowing that solution of pH less than 7 are acid and greater than 7 are basic (item # 38). In Electrochemistry students had difficulty calculating oxidation numbers, writing equations for reactions at anode and cathode with electrical current, and defining oxidation, reduction, oxidizing agent, and reducing agent (item #'s 35, 36, and 37).

BOSTON PUBLIC SCHOOLS

DEPARTMENT OF EDUCATIONAL TESTING

CURRICULUM REFERENCED FINAL CHEMISTRY

1985 - 1986

I.4	Law of conservation of mass	1	
I.8	Calculate Kelvin temperature from Celsius and vice-versa	2	
I.15	Define chemical change	3	
II.8	Recognize chemical formulas	4	
II.9	Define atomic mass, molecular mass, gram atomic mass, gram molecular mass and mole	5	
II.9		6	
II.9		7	
II.10	Interpret chemical symbols and formulas	8	
II.10		9	
II.11	Determine empirical formulas from info. about percent composition	10	
II.12	Writing balanced chemical equations	11	
III.10	Determine combining power of elements from location periodic tab.	12	
III.4	Define atomic no., periods, families, groups & transition elems.	13	
III.8	Locate metals, nonmetals & metalloids in the periodic table	14	
III.3	Understand basis for acceptance of Mendeleev's periodic table	15	
IV.5	Describe current model of the nucleus	16	
IV.6	Define isotope	17	
V.6	List order of filling available in orbitals of elements frm H/Rb	18	
V.9	Define filled shell and valence electrons	19	
III.7	Describe the general characteristics of each family	20	
V.20	Define covalent bond	21	
V.8	Associate energy of orbitals with location of elements/period.tab	22	
V.5	Number of electrons that may occupy each set of orbitals	23	
V.18	Recognize common polyatomic ions	24	
V.27	Define polar covalent bond	25	
XI.1	State Boyle's law	26	
XI.11	Value of Avogardro's number	27	
XI.5	Define standard temperature and pressure of a gas	28	
XI.10	Know the molar volume at STP	29	
XII.1	Describe the assumptions of the kinetic theory	30	
XIII.3	Compute concentrations in solution	31	
XVII.2	Define conjugate acid-base pairs, amphoteric substance, etc.	32	
XVII.8	Define pH	33	
XVIII.7	Define anion, cation, anode, cathode, electrolysis, electroplatng	34	
XVIII.4	Calculate oxidation numbers	35	
XVIII.8	Write equations for reactions at anode & cathode w/elec. current	36	
XVIII.5	Define oxidation, reduction, oxidizing agent & reducing agent	37	
XVII.9	Solutions of pH less than 7 are acid, greater than 7 are basic	38	
XIV.4	Solve mixed volume, mole & weight problems	39	
XV.11	Explain function of a catalyst on rate of a chemical reaction	40	

```
 515 CHEMISTRY            TECR5395             11/07/86
PERCENTAGE OF CORRECT ANSWERS PER ITEM
NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY **

SCHL    1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 TOTAL

 1040  63 31 72 90 40 79 63 52 90 54 70 59 95 75 75 72 54 84 45 52 79 65 63 68 68 52 70 54 47 50 34 63 45 72 70 56 61 65 38 50 62
 1110  67 63 61 84 46 75 48 50 71 51 59 48 75 59 65 53 51 82 32 38 67 53 40 42 46 28 50 40 63 46 40 21 46 40 30 15 55 25 13 55 50
 DISA  65 48 66 87 44 77 55 51 80 53 64 53 84 66 69 62 53 83 38 44 72 59 51 54 56 39 59 46 56 47 37 40 45 55 48 34 58 43 25 53 55

 1250  70 35 59 81 37 50 48 62 85 25 62 49 74 71 81 61 32 84 37 36 63 55 55 51 41 53 61 14 44 40 55 51 37 38 28 42 31 38 23 25 50
 1100  81 47 65 89 60 52 73 60 71 50 71 52 92 76 76 63 42 94 44 36 57 50 68 68 68 44 63 36 63 44 60 63 57 39 42 15 18 57 13 23 56
 DISB  73 39 61 84 45 51 56 61 80 33 65 50 80 73 80 61 35 87 40 36 61 53 60 57 50 50 61 21 50 41 57 55 44 39 33 33 26 45 20 25 52

 1360  50 28 64 85 50 64 64 57 85 64 50 57 92 78 71 92 64 ** 64 57 71 71 64 71 92 71 64 42 42  7 21 71 50 64 35 35 35 28 35 35 58
 1120  92 32 67 78 60 42 67 53 89 50 60 71 75 67 75 78 53 92 50 46 67 46 39 82 50 71 64 39 60 42 50 64 50 57 50 71 39 75 60 71 61
 1160  ** 43 68 80 52 68 76 76 92 72 68 52 92 84 76 80 28 96 48 64 68 72 64 72 68 68 80 52 52 20 48 44 24 56 24 28 28 28 36 12 59
 DISC  86 37 67 80 55 56 70 62 89 61 61 61 85 76 74 82 46 95 52 55 68 61 53 76 65 70 70 44 53 26 43 58 40 58 37 47 34 47 46 41 60

 1050  93 63 75 87 70 88 67 55 77 74 78 54 92 86 74 73 67 88 68 65 79 74 75 73 77 67 84 59 69 46 69 62 68 77 69 82 67 60 37 43 71
 1070  61 33 79 92 48 79 46 46 84 64 53 51 87 79 76 61 30 69 35 43 61 61 66 56 71 58 76 46 56 33 51 58 58 58 25 20 35 33 20 20 55
 DISD  83 53 77 88 63 85 60 52 79 71 70 53 90 83 75 69 55 82 57 58 73 70 72 67 75 64 82 55 65 42 63 61 65 71 55 61 56 51 32 35 65

 1080  50 16 37 50 22 31 34 29 52 33 26 43 59 50 43 46 24 49 33 22 31 37 31 19 36 37 44 24 32 18 38 31 25 30 23 30 24 39 27 29 34
 1210  65 38 43 90 76 69 78 63 92 56 61 54 89 87 83 63 40 94 58 45 61 60 76 89 43 40 38 32 56 34 52 40 32 40 41 41 30 12 18 12 55
 1240  87 62 90 87 76 85 78 84 85 71 68 85 89 76 76 67 70 84 64 68 90 85 81 75 73 87 84 59 71 76 65 76 81 84 68 50 57 60 53 42 74
 DISE  65 35 56 72 52 57 58 54 73 50 48 58 75 67 63 57 42 71 49 42 57 58 58 54 49 53 54 37 50 40 50 47 44 49 41 39 36 39 33 28 51

 DISA  65 48 66 87 44 77 55 51 80 53 64 53 84 66 69 62 53 83 38 44 72 59 51 54 56 39 59 46 56 47 37 40 45 55 48 34 58 43 25 53 55
 DISB  73 39 61 84 45 51 56 61 80 33 65 50 80 73 80 61 35 87 40 36 61 53 60 57 50 50 61 21 50 41 57 55 44 39 33 33 26 45 20 25 52
 DISC  86 37 67 80 55 56 70 62 89 61 61 61 85 76 74 82 46 95 52 55 68 61 53 76 65 70 70 44 53 26 43 58 40 58 37 47 34 47 46 41 60
 DISD  83 53 77 88 63 85 60 52 79 71 70 53 90 83 75 69 55 82 57 58 73 70 72 67 75 64 82 55 65 42 63 61 65 71 55 61 56 51 32 35 65
 DISE  65 35 56 72 52 57 58 54 73 50 48 58 75 67 63 57 42 71 49 42 57 58 58 54 49 53 54 37 50 40 50 47 44 49 41 39 36 39 33 28 51
 STOT  72 42 64 81 52 64 59 55 78 53 59 55 81 72 71 63 45 81 47 46 64 60 59 59 57 54 63 40 54 40 51 51 48 53 43 42 41 44 30 34 56
```

PHYSICS

INSTRUMENT AND POPULATION DESCRIPTION

This is a forty-item multiple choice test measuring selected circled objectives in the curriculum strands of Physics Preliminaries (9 items), Mechanics (19 items), Electromagnetism (6 items), Properties of Matter/Kinetic Theory/Thermodynamics/Waves (3 items), and Light/Optics (3 items).

The population includes all high school students (with the exception of the exam schools) who took a Physics course and for whom valid answer sheets were submitted.

SYSTEM STRENGTHS AND WEAKNESSES

Overall, students performed poorly on this test with a system-wide average score of 52%. Generally, students appear to be mastering the objectives in the domain entitled Properties of Matter/Kinetic Theory/Thermodynamics/Waves and most of the items in the Physics Preliminaries domain. In this latter domain students had difficulty with items involving basic concepts of trigonometry of right angles and modern standards of length and time (item #'s 25 and 27).

In the remaining domains there were a significant number of items that more than fifty percent of the students answered incorrectly. In Mechanics students had difficulty with items that tapped motion in more than one direction (item #'s 12, 32, and 36), motion in one direction (item #'s 17 and 26), vectors (item # 16), force (item #23), work/energy/power/conservation (item # 40), and momentum/conservation (item #39). In the Electromagnetism domain students performed poorly on the items involving electricity/electrostatics (item #'s 3 and 18), electrical currents/resistors/capacitors (item #'s 3 and 24), and simple circuits (item # 13). In the Light/Optics domain performance was poor on the items tapping the nature of light and illumination (item #'s 5, 10, and 15).

BOSTON PUBLIC SCHOOLS

DEPARTMENT OF EDUCATIONAL TESTING

CURRICULUM REFERENCED FINAL PHYSICS

1985 - 1986

I.B.5	Other basic units of measurement & concept of derived units	1
II.A.4	Definition of average acceleration and its use	2
III.B.10	Simple parallel plate capacitor	3
IV.C.2	How temperature is measured and how it differs from heat	4
V.A.1	The five properties associated with light	5
I.A.4	Acquiring familiarity with scientific notation	6
II.D.8	Nature of friction: direction,magnitude,static,kinetic & coeff.	7
III.B.3	Resistance & resistors; Ohm's Law $V = R I$ & units of resistance	8
IV.C.1	Concept of heat & temperature are related but distinct quantity	9
V.A.2	Properties that light possesses that can be associated w/waves	10
I.A.5	Understand arithmetic manipulations with scientific notation	11
II.C.5	Motion in vertical direction is independent of horizontal dir.	12
III.E.5	2 types of connections, series & parallel, which occur elec circ	13
IV.C.3	Three systems of measuring temp.: Farenheit, Celsius & Kelvin	14
V.A.3	Fact that color is simply the frequency of visible light	15
II.B.2	Utility of representing position & velocity by vectors	16
II.A.10	Understand the physics of free fall	17
III.A.2,5	Electrons & Coulomb's law	18
I.B.8	Metric system as a decimal system	19
II.B.4	Fundamentals of adding vectors; resultant of 2 or more vectors	20
III.B.7	Relation exists between power & resistance, $P = I^2 R$	21
I.B.9	Contrast weight, (earth vs. moon) & mass independent of location	22
II.D.10	Universal law of gravitation, and Newton's constant	23
III.B.4	Physical model of electron transport in conductors; resistivity	24
I.A.10	Basic concepts of trigonometry of right triangles	25
II.A.12	Area under curve by plotting speed vs. time is distance traveled	26
I.B.3	Modern standards of length and time	27
II.B.1	Concept of a vector as distinguished from a scalar	28
I.A.9	Basic results from geometry	29
II.B.8	Graphical & analytical resolution of vectors	30
I.B.7	Systems of units & conversion factors	31
II.C.11	Define simple harmonic motion, its amplitude & period	32
II.A.1	Concepts of displacement and average speed	33
II.A.6	Calculate final velocity from initial velocity, accelerat.,time	34
II.C.8	Projectile is fired at angle; velocity must be horiz. & vert.	35
II.C.10	Knowledge of the kinematics of uniform circular motion	36
II.D.3,4	Newton's second law ; unit of force	37
II.F.4	Scientific definition of power	38
II.E.3	Momentum (p) is product of mass times velocity	39
II.F.8	Energy & momentum conservation in collisions;elastic/inelastic	40

```
 535 PHYSICS            I2CR5005            11/07/86
PERCENTAGE OF CORRECT ANSWERS PER ITEM
NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY **

SCHL    1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 TOTAL

 1040  91 89 34 45 38 95 85 75 65 46 91 65 46 77 53 10 46 34 59 79 73 40 57 48 61 20 10 69 61 81 83 16 63 91 42 28 83 79 40 69 59
 1110  40 70 25 60 20 95 55 35 75 30 55 25 35 80 45  5 25 45 70 85 50 85 65 40 35 30 45 55 35 50 85 10 30 80 75 15 60 50 35 25 48
 DISA  76 84 31 50 33 95 76 63 68 42 81 53 43 78 50  8 40 37 62 81 66 53 59 46 53 23 20 65 53 72 84 14 53 88 52 24 76 71 39 56 55

 1250  ** 73 13 86 43 90 90 53 76  3 70 23 30 90 40  6  3 33 ** 40 66 70 33 20 40 16 16 70 56 73 90 46 60 96 46 16 70 70  3 43 51
 1100  ** 62  0 22 81 92 66 40 77 40 55 88 22 70 59 59 44 37 70 59 25 59 48 62 62 33 14 62 44 62 59 33 55 66 29 40 48 40 74 33 52
 DISB  ** 68  7 56 61 91 78 47 77 21 63 54 26 80 49 31 22 35 85 49 47 64 40 40 50 24 15 66 50 68 75 40 57 82 38 28 59 56 36 38 52

 1060  ** **  0 ** 50 ** ** 50 ** ** ** 50 ** 50 ** ** ** 50 ** ** ** **  0 ** ** 50  0 50 ** 50 **  0  0 **  0 ** ** ** ** ** 75
 1120  80 50 40 60 50 60 70 30 60 30 60 80 70 50 30 20 60 40 50 20 30 60 40 50 20 30 60 30 50 50 60 20 50 30 50 20 30 60 60 20 45
 1160  ** 46 61 38 69 76 69 46 61 38 53  0 38 61 30 23 76 38 76 76 53 69 69 30 53  7 46 61 69 84 76 30 69 69 30 46 46 46 61 61 54
 DISC  92 52 48 52 60 72 72 40 64 40 60 36 56 56 36 28 72 40 68 56 48 68 52 44 44 20 48 48 64 68 72 24 56 56 36 40 44 56 64 48 52

 1050  ** ** 47 86 43 ** ** 86 ** 56 ** 78 60 95 82 56 78 69 73 73 91 86 82 69 78 69 39 86 95 86 ** 69 86 65 78 60 69 91 ** 91 79
 1070  90 70 50 70 20 ** 60 70 60 40 90 70 20 ** 60 30 50 70 ** ** 40 70 80 60 60 80 70 ** 70 70 90 60 50 70 ** 60 70 90 80 50 68
 DISD  96 90 48 81 36 ** 87 81 87 51 96 75 48 96 75 48 69 69 81 81 75 81 81 66 72 72 43 90 87 81 96 66 75 66 84 60 69 90 93 78 76

 1080  62 32 13 21 48 29 27 10 54  8 27 27 21 13 27 16 13 29 32 13 13 24  8 32 10 13 24 37 16 54 35 29 27 24 43 16 24 16 16 21 25
 1210  34 68 21 31 47 ** 63 36 73 21 63 36 10 31 36  0 36 31 84 21 63 63 36 26 36  0  0 68 52 68 73 15 47 89 52 42 68 84 78 36 47
 1240  95 64 46 68 46 71 51 53 93 46 33 48 44 51 60 22 37 40 82 44 44 60 37 68 40 42 46 66 53 46 57 48 53 62 53 37 44 44 53 55 53
 DISE  81 53 29 44 47 61 44 34 75 27 36 38 29 33 43 15 28 34 64 28 36 47 26 47 28 23 29 56 39 53 52 35 42 53 49 30 41 41 44 39 41

 DISA  76 84 31 50 33 95 76 63 68 42 81 53 43 78 50  8 40 37 62 81 66 53 59 46 53 23 20 65 53 72 84 14 53 88 52 24 76 71 39 56 55
 DISB  ** 68  7 56 61 91 78 47 77 21 63 54 26 80 49 31 22 35 85 49 47 64 40 40 50 24 15 66 50 68 75 40 57 82 38 28 59 56 36 38 52
 DISC  92 52 48 52 60 72 72 40 64 40 60 36 56 56 36 28 72 40 68 56 48 68 52 44 44 20 48 48 64 68 72 24 56 56 36 40 44 56 64 48 52
 DISD  96 90 48 81 36 ** 87 81 87 51 96 75 48 96 75 48 69 69 81 81 75 81 81 66 72 72 48 90 87 81 96 66 75 66 84 60 69 90 93 78 76
 DISE  81 53 29 44 47 61 44 34 75 27 36 38 29 33 43 15 28 34 64 28 36 47 26 47 28 23 29 56 39 53 52 35 42 53 49 30 41 41 44 39 41
 STOT  86 68 29 53 46 81 66 50 74 33 61 49 36 63 49 22 38 40 70 54 51 58 45 47 45 29 28 63 52 65 71 34 53 69 50 32 57 58 49 48 52
```

SOCIAL STUDIES

BOSTON PUBLIC SCHOOLS

DEPARTMENT OF EDUCATIONAL TESTING

CURRICULUM REFERENCED FINAL SOCIAL STUDIES - LEVEL 3

1985 - 1986

B.7	Use maps frequently and completing at least one map project	1
B.7		2
B.7		3
B.7		4
B.7		5
B.7		6
C.4	Give a simple definition of history	7
B.8	Experiencing the curriculum first-hand	8
C.12	Describe who consumes what in a community	9
C.12		10
C.47	Being able to give brief description of importance of at least 5 major items in Boston history and at least 8 major personalities	11
C.47,49		12
C.34	Identify major Boston neighborhoods on a map & be able to place	13
C.11	List major economic activities in a community	14
C.47,49	See Questions #11 and 12 for objectives	15
C.47	See Question # 11 for objective	16
C.47		17
C.49	See Question #12 for objective	18
C.49		19
C.49		20
C.47,49	See Question #11 and 12 for objectives	21
C.50	Describe how the landscape & skyline of Boston has changed	22
C.36	Identify major parks in & around Boston on a map & place them	23
C.53	Name the 3 parts of Boston's city govt. & describe what ea. does	24
C.37	Locate important Boston landmarks, historical/other, on a map	25
C.39	Locate Boston, MA and the New England states on a map of the US	26
C.57	Name current Pres. of US, Governor of MA, Mayor of Bos. & US Sen.	27
C.35	Identify major bodies of water & parks in and around Bos. on a map	28
C.35		29
C.38	Locate surrounding towns on a map	30
C.38		31
C.49	Identify & describe 8 major persons in Bos. history	32
C.47	Describe importance of 5 major items in Bos. history	33
C.49	Identify and describe importance of at least eight major personalities in Boston history from the Revolution to the present	34
C.49		35
C.49		36
C.57	Name current Pres. of US, Governor of MA, Mayor of Bos., US Sen.	37
C.49	See Question #34 for objective	38
C.43,45	Identify 7 continents, 4 oceans, No/So hemispheres on map & globe	39
C.57	See Question #37 for objective	40
C.47	See Question #33 for objective	41
C.8,36	Experience curriculum first-hand; Identify parks in Boston on map	42
C.30	Know approximate population of Boston & rank in the cities of US	43
C.18	Name major transportation systems in a community	44
C.34	Identify & place major Bos. neighborhoods on a map	45
C.39	Locate Boston, MA and New England states on a map of US	46
C.53	Name 3 parts of Boston city govt. and describe what each part does	47
C.40	Locate some states on a map of the US, including Texas, California Alaska, and Hawaii	48
C.40		49
C.46	Distinction between city, state & country; Name the neighborhood, city, state, region, country, and continent in which one lives	50

```
 934 SGC LEVL 3          TECK5005            11/07/86
PERCENTAGE OF CORRECT ANSWERS PER ITEM
NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY **

SCHL    1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40

 4160  81 94 91 97 72 32 89 97 81 83 89 43 67 91 78 81 59 59 72 51 67 54 67 75  8 94 81 67 94 27 27 59 59 37 67 48 86 83 75 81
 4170  69 86 ** 95 78 21 47 91 82 73 ** 69 43 69 82 91 73 82 86 39 47 34 60 47 47 91 86 43 73 69 43 13 52 26 47 21 78 78 91 78
 4173  50 90 80 90 60 15 75 ** 55 55 60 20 45 85 40 55 55 30 80 20 40 60 30 80 10 85 55 70 55 65 20 15 25 40 80 35 80 65 70 45
 4220  50 69 92 84 61 42 80 84 53 65 80 65 65 88 46 84 65 61 88 61 46 73 46 80 19 92 92 76 80 38 15 69 96 36 65 30 61 80 53 38
 4221  91 79 83 91 79 37 91 95 83 75 91 45 75 91 54 87 62 54 54 37 58 58 66 70 16 91 58 62 83 66 29 29 54 37 50 29 62 75 83 45
 4570  74 74 79 84 64 46 53 94 74 82 69 76 71 79 46 74 66 66 74 61 82 76 79 89 15 97 84 84 82 43 61 64 71 23 79 61 87 74 51 61
 4571  65 84 87 75 56 25 81 68 87 84 93 65 75 84 84 87 68 84 78 84 81 71 81 75 18 84 84 65 78 40 25 84 71 43 59 53 68 68 84 59
 4010  73 75 88 98 58 37 83 94 66 77 84 49 71 92 62 86 64 56 79 54 66 83 54 84 24 86 77 71 83 47 49 52 64 62 62 49 79 75 77 69
 4240  65 55 90 80 55 20 57 82 60 47 57 30 67 75 57 65 45 55 55 32 27 55 37 52 17 60 65 62 60 32 35 60 37 22 50 45 70 67 62 45
 4241  95 ** 95 95 56 13 78 ** 95 ** 86 78 95 82 ** 78 91 86 86 78 91 73 78 91 30 ** 73 78 82 47 91 56 82 43 95 65 91 95 95 78
 4270  78 81 96 ** 69 39 69 87 87 78 72 57 51 90 33 60 54 63 54 42 48 51 51 81  9 81 81 48 54 54 39 60 42 60 69 60 75 81 75 63
 4310  96 93 86 93 72 48 58 96 86 82 89 62 86 86 37 79 75 62 82 62 48 68 65 93 68 89 89 58 58 68 44 34 65 27 72 37 96 82 86 72
 4311  62 75 79 91 50 16 75 83 66 70 75 45 66 87 41 79 62 62 75 50 50 62 41 75 45 79 62 58 62 45 50 41 54 45 45 58 79 70 79 70
 4370  80 80 93 96 73 16 76 93 63 70 93 80 76 86 63 76 63 53 60 66 80 80 73 90 43 96 80 76 66 60 63 73 60 70 66 43 73 83 83 70
 4371  87 92 89 92 68 32 82 93 85 76 90 31 64 93 54 89 65 70 92 21 42 89 42 78 32 85 90 78 70 53 43 59 45 43 62 23 81 65 75 50
 4430  78 ** 85 96 42 35 96 96 92 85 96 89 78 89 32 89 60 39 67 39 78 85 39 96 85 78 85 67 75 39 50 64 50 35 96 89 89 92 92 60
 DISA  76 82 88 91 63 31 75 91 76 75 83 54 68 86 57 79 64 62 73 48 59 69 56 79 29 88 79 68 73 48 43 54 57 41 66 46 79 76 76 61

 4030  57 47 89 89 63 21 68 94 57 36 52 36 47 73 10 47 31 52 31 10 42  5 36 52  0 89 42 84 47 31 10 21 31 10 42 21 52 57 52 52
 4031  68 86 90 81 81 13 59 90 68 45 90 63 77 90 72 ** 54 40 81 36 54 54 36 86  9 77 86 54 50 59 22 31 77 22 40 36 86 77 63 63
 4081  68 68 81 93 53 31 53 96 81 81 81 34 75 62 62 84 50 56 62 34 28 68 62 84 34 81 75 56 65 25 15 28 46 46 59 37 87 90 56 62
 4082  95 85 52 85 57 52 80 85 47 71 61 14 57 ** 66 33 71 42 76 61 38 90 71 95 19 80 85 66 42 23 57 95 52 28 85 85 95 85 ** 95
 4290  55 68 60 91 42 26 68 88 57 53 60 33 62 84 31 71 42 28 33 20 33 24 46 71  4 84 75 33 35 26 20 17 26 15 24 37 57 62 42 53
 4560  78 87 92 87 66 26 78 96 75 77 82 61 78 75 38 87 68 70 85 56 66 84 73 85 42 91 75 66 73 38 45 19 28 42 63 43 85 84 73 75
 4561  75 95 91 91 66 54 79 91 75 83 87 58 70 87 79 79 75 70 58 41 37 50 62 79 62 91 50 54 54 41 33 41 37 50 45 58 91 70 66 75
 4690  69 83 88 85 67 37 64 95 75 78 82 64 72 74 57 82 69 58 43 24 51 48 42 75 15 94 81 68 65 35 38 43 44 45 69 50 87 78 65 58
 4070  92 94 96 86 76 45 86 94 76 74 94 82 76 90 86 76 80 86 94 27 80 72 92 94 23 86 74 86 76 27 27 52 52 49 66 54 82 64 78 64
 4080  96 ** 96 96 80 64 80 92 92 92 72 52 80 92 60 ** 72 80 88 64 84 80 84 76 24 96 64 76 84 32 20 36 48 52 72 48 88 92 52 48
 4151  87 86 83 80 66 42 76 77 81 83 81 57 70 87 28 84 73 53 61 46 47 67 23 81 38 84 84 81 73 46 42 38 40 54 59 64 69 77 61 63
 4190  88 86 93 91 78 50 85 93 80 81 88 60 88 88 68 90 80 61 73 56 76 76 58 83 45 91 80 76 76 38 46 65 51 51 63 58 66 83 68 68
 4192  89 89 86 86 68 31 82 93 75 79 93 41 86 82 62 82 62 96 89 79 89 72 65 75 41 89 58 82 72 41 27 68 75 10 44 20 75 93 86 41
 4200  77 72 95 81 81 18 90 95 ** 90 77 22 72 ** 18 90 54 31 31 27 36 13 59 95  9 86 81 68 40 81 81 ** 72 59 86 72 95 95 45 40
 4201  91 85 74 91 42 22 54 94 68 91 71 34 82 97 45 77 51 48 51 17 42 71 60 88 62 91 80 31 48 28 48 51 25 37 71 42 91 85 71 54
 4670  94 89 89 89 57 42 63 84 73 68 84 57 73 78 89 84 68 84 73 63 84 36 52 73 78 94 42 47 68 42 57 26 42 42 57 47 78 57 42 68
 DISB  80 84 85 87 65 36 73 91 76 76 80 52 74 84 53 81 65 60 64 40 56 60 56 81 31 88 74 66 64 37 37 44 45 41 60 49 79 78 65 62

 4351  81 79 88 84 54 15 75 86 72 61 63 75 86 86 43 86 45 52 43 54 59 61 31 68 25 86 77 27 59 40 29 27 52 27 54 40 84 63 68 45
 4130  75 77 75 72 55 13 72 91 77 75 80 66 80 91 41 66 63 61 75 25 69 66 44 80 19 83 69 58 50 47 41 25 36 36 61 41 80 72 66 44
 4131  64 93 90 96 61 32 87 93 83 90 80 70 83 96 87 90 54 54 48 25 32 80 54 83 12 83 96 87 87 25 64 54 32 61 77 19 77 48 74 54
 4140  88 96 96 ** 74 48 81 88 66 70 96 77 85 92 88 77 51 74 77 70 59 66 55 85 25 92 74 70 70 40 44 70 37 33 59 55 85 77 70 74
 4150  52 66 77 78 57 24 52 82 42 50 70 24 68 77 21 38 50 28 47 29 36 26 28 64 24 71 73 52 43 28 29 21 33 35 36 33 54 50 54 45
 4250  69 81 80 88 51 34 61 89 65 74 75 53 80 87 48 88 55 56 52 37 41 52 31 77 37 89 77 59 60 47 27 52 37 28 32 31 73 68 76 51
 4340  75 84 87 83 68 33 82 90 64 70 87 67 81 83 77 80 49 64 66 63 62 48 34 73 32 85 70 63 58 40 26 41 46 30 41 26 63 67 65 48
 4350  72 73 77 86 45 36 62 82 50 52 62 33 62 81 24 58 53 32 32 22 34 40 36 72 24 85 61 44 56 28 13 28 49 32 42 29 66 61 58 33
 4390  79 83 75 79 54 33 62 83 75 83 75 70 75 87 70 62 70 87 75 70 66 70 54 70 29 ** 75 70 70 54 41 37 45 16 75 29 95 79 62 50
 4391  75 87 87 79 83 37 62 ** 79 91 75 45 87 91 87 66 45 66 91 37 58 83 29 91 37 87 83 70 58 91 70 20 41 20 79 50 87 91 41 33
 4400  70 78 92 96 74 47 78 90 60 64 84 52 66 84 52 92 62 72 80 29 49 56 35 72 23 84 70 62 64 35 17 33 47 31 33 23 50 72 41 64
 4550  96 ** 92 96 68 24 92 ** 80 84 96 48 80 96 96 ** 88 84 80 52 52 52 36 83 80 96 92 88 76 64 68 84 68 28 72 64 80 76 76 76
 4022  90 ** 81 95 63 59 77 90 86 72 81 77 86 81 68 86 45 59 63 40 59 45 54 77 63 95 90 81 72 45 36 68 59 50 81 59 90 77 50 54
 934 SOC LEVL 3          TECR5005             11/07/86
PERCENTAGE OF CORRECT ANSWERS PER ITEM
NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY **

SCHL    41 42 43 44 45 46 47 48 49 50 TOTAL

 4160   40 67 37 89 75 75 29 45 81 75 67
 4170   39 91 43 91 69 73 13 69 69 82 65
 4173   35 40 55 80 40 60 40 70 85 55 54
 4220   73 88 30 88 57 73 38 57 69 53 64
 4221   24 66 29 95 66 58 33 66 62 70 63
 4570   25 28 48 84 79 69 51 38 64 69 66
 4571   53 59 87 84 81 75 53 65 75 78 70
 4010   54 66 67 81 62 66 47 60 75 79 68
 4240   12 40 52 62 45 40 57 37 50 55 51
 4241   69 86 82 82 78 82 56 82 95 86 80
 4270   42 63 66 84 48 63 54 69 84 54 64
 4310   65 62 44 96 68 79 62 72 82 86 71
 4311   45 66 79 83 79 54 58 62 75 54 63
 4370   40 80 46 93 80 73 70 76 70 60 71
 4371   46 42 31 71 56 54 48 62 76 67 64
 4430   75 92 67 67 53 75 92 67 85 67 73
 DISA   45 61 53 82 64 65 50 61 74 68 66

 4030   21 21 52 63 36 47 26 42 68 57 44
 4031   22 45 36 81 68 45 31 68 81 59 60
 4081   43 50 56 90 56 65 28 53 65 62 59
 4082   38 52 66 95 66 52 90 76 76 71 67
 4290   24 33 31 73 33 53 26 40 62 57 46
 4560   56 61 59 87 73 73 15 59 80 73 67
 4561   66 50 62 83 62 62 45 70 87 87 66
 4690   27 30 58 64 36 56 34 68 68 60 60
 4070   47 66 78 92 68 72 43 58 72 74 71
 4080   28 56 28 88 84 72 52 56 76 84 70
 4151   40 53 73 81 61 63 54 59 73 71 64
 4190   51 73 71 78 66 70 60 65 76 70 71
 4192   51 62 51 86 82 82 44 51 82 79 69
 4200   22 50 31 95 72 72 27 59 50 72 64
 4201   22 45 45 91 65 80 57 68 62 71 62
 4670   73 52 42 63 36 73 42 52 78 73 64
 DISB   39 50 56 81 59 65 41 59 72 69 63

 4051   38 52 65 81 54 54 36 47 50 65 58
 4130   41 44 30 75 47 72 47 41 66 69 59
 4131   61 48 48 70 58 51 64 64 64 90 66
 4140   33 66 55 88 59 81 48 62 70 88 70
 4150   24 40 38 64 50 43 21 45 61 52 46
 4250   35 54 61 82 58 57 59 52 73 68 59
 4340   50 54 55 61 55 51 30 41 70 72 60
 4350   30 42 50 72 44 60 36 49 66 57 50
 4390   37 70 45 83 54 79 29 37 62 70 64
 4391   29 70 50 75 45 70 20 41 75 70 65
 4400   27 45 31 84 39 56 17 50 68 56 57
 4550   76 80 84 84 72 76 80 52 68 88 76
 4022   31 54 36 72 59 77 45 50 81 81 68
 934 SOC LEVL 3          TECR5005             11/07/86
PERCENTAGE OF CORRECT ANSWERS PER ITEM
NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY **

SCHL    1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40

 4052  70 80 60 70 50 60 85 90 50 65 80 75 75 80 80 80 90 60 85 20 50 90 65 80 65 90 75 60 80 40 50 80 65 85 85 50 80 80 60 30
 4100  76 80 80 89 58 28 86 80 84 82 89 58 69 80 26 36 65 60 82 41 56 69 21 73 17 84 71 52 67 19 32 19 26 30 36 36 54 76 54 63
 4120  85 85 ** 95 75 25 70 95 85 70 95 80 70 90 70 90 80 95 95 30 35 65 45 85 10 ** 80 75 85 30 45 80 60 65 55 40 90 90 85 65
 4121  61 83 ** 94 83 38 88 ** 55 77 94 77 77 72 83 ** 72 61 83 38 38 83 44 94 33 ** 77 77 77 50 44 77 22 33 44 66 ** 83 94 33
 4530  73 76 85 82 64 20 64 93 76 67 79 31 76 78 17 75 45 60 50 21 43 31 18 67 14 95 73 57 54 32 21 10 28 17 39 34 57 54 57 42
 4531  95 ** 95 ** 95 90 ** ** 95 95 85 60 65 95 30 90 60 45 55 40 85 35 25 80 25 ** ** 65 90 65 35 75 50 30 65 55 80 90 70 60
 4590  74 79 69 77 44 23 62 88 69 74 59 30 55 83 20 67 33 57 47 28 37 55 35 49 18 66 62 52 38 28 27 23 38 23 33 42 57 52 49 57
 4592  ** ** 81 ** 63 54 63 81 90 90 ** 63 81 ** 63 90 45 63 63 36 36 63 81 54  9 ** 63 81 ** 63 18 18 54 63 72 54 90 90 81 36
 4630  86 91 95 89 71 57 78 93 73 79 80 50 75 89 54 86 58 65 73 50 61 67 52 80 38 87 95 76 84 43 41 49 49 38 53 43 57 73 76 60
 DISC  75 82 84 86 61 35 72 89 68 71 78 53 75 85 50 77 55 58 62 39 50 55 37 74 29 86 76 61 63 40 33 39 42 33 48 37 69 68 63 50

 4260  77 80 74 71 65 28 62 ** 71 77 85 17 62 91 54 65 17 57 74 42 62 31 48 85 17 85 88 60 80 17 37 11 28 42 45 40 85 71 45 57
 4280  93 87 96 ** 74 45 93 90 87 74 96 70 96 80 80 80 64 90 93 51 96 93 90 93 48 96 ** 93 ** 80 70 93 38 51 83 96 96 ** 58 54
 4283  69 74 84 88 62 38 62 93 59 64 74 47 52 83 16 71 52 42 22 18 25 40 61 67 18 89 71 59 62 27 25 38 44 38 50 18 79 74 61 30
 4381  80 88 94 91 66 38 63 ** 75 75 72 41 68 86 69 52 52 33 41 25 22 83 25 68 16 94 58 80 83 77 75 16 33 19 66 61 91 77 58 52
 4640  73 79 77 82 60 34 67 88 56 61 82 74 65 86 64 74 63 64 69 45 62 60 53 75 32 80 74 56 66 50 40 59 65 45 47 47 66 62 50 63
 4650  75 65 63 88 59 34 59 86 72 68 84 63 72 90 90 81 68 50 54 59 47 86 50 81 18 90 68 72 75 29 20 45 72 18 34 31 65 68 43 47
 4062  89 92 85 96 78 53 89 92 96 ** 92 85 75 92 82 82 85 78 82 89 78 89 60 96 89 ** 96 96 89 82 82 89 46 85 82 85 ** 96 75 **
 4321  62 78 71 78 37 18 65 93 65 68 81 84 28 84 18 68 56 59 62 37 37 43 71 81 15 81 71 50 71 43 31 25 28 34 37 28 59 75 37 43
 4322  74 86 78 74 49 17 66 86 54 56 56 27 23 68 17 56 43 47 29 13 25 39 23 64 11 76 68 49 49 21 25 19 11 21 23 21 62 72 58 35
 4361  71 80 71 95 76 14 95 90 85 76 61 80 76 95 19 90 57 76 57 57 57 38 47 90 23 90 95 57 76 57 47 42 19  4 61 52 61 ** 61 85
 4541  76 85 97 97 94  8 52 94 82 73 97 67 64 79 67 76 58 50 70 50 55 61 58 79 20 97 79 61 67 58 55 35 29 17 76 52 94 97 64 44
 4543  45 84 77 84 70 22 63 93 65 65 65 36 27 81 27 79 61 65 45  9 40 27 22 65 27 90 77 56 36 45 36 22 27 34 38 43 68 77 56 43
 DISD  73 81 80 85 64 30 68 91 68 68 78 57 59 84 50 72 56 58 56 38 49 56 50 78 26 87 76 63 68 46 42 42 41 35 50 44 75 76 54 52

 4353  28 56 64 65 37 12 71 75 53 56 40 15 75 90  9 65 34 21 45 21 31 43 28 46 21 93 59 71 56 59 21  9 37 25 18 18 65 65 50 37
 4061  ** 95 95 ** 61 19 85 ** 90 90 ** 23 76 76 47 85 19 52 47 23 19 42 14 95 33 80 76 42 66 38 61 23 33 14 57 28 90 85 61 76
 4113  65 80 80 95 75 40 85 90 65 50 95 85 75 70 35 80 60 65 70 40 55 65 45 70 50 95 70 90 65 35 20 25 30 50 60 25 65 80 60 30
 4210  90 86 88 95 62 18 83 97 83 95 97 67 88 90 67 ** 67 90 97 72 69 88 74 97 13 90 81 53 83 48 62 53 58 39 95 48 ** 95 83 79
 4230  53 80 66 77 47 39 61 88 60 38 58 52 60 73 36 65 44 47 47 12 34 38 39 74 12 77 65 47 55 47 38 30 33 41 30 17 77 63 41 34
 4271  81 94 94 97 64 29 83 94 83 91 97 89 83 ** 97 91 78 94 ** 83 94 72 ** 89 24 97 70 81 89 59 43 56 56 24 78 78 81 97 86 86
 4360  84 76 79 87 64 20 82 79 69 76 79 33 82 89 53 74 35 69 53 38 48 64 71 66 28 82 58 56 53 35 25 15 43 28 41 41 64 69 48 38
 4410  79 90 95 96 69 37 79 87 66 77 96 56 80 87 75 90 74 87 88 70 79 69 67 80 22 82 80 69 83 70 56 67 53 48 79 45 82 91 72 50
 4580  64 82 82 91 65 39 70 95 69 75 75 34 75 89 26 61 51 35 47 26 30 47 40 80 28 86 80 52 60 38 30 27 38 27 85 34 79 69 59 42
 4620  82 78 88 86 66 32 79 82 71 75 80 42 73 91 31 84 51 66 50 44 44 47 34 68 32 85 65 58 62 29 32 14 34 32 48 37 67 78 63 48
 DISE  72 81 84 88 61 31 76 88 70 72 80 48 76 87 45 78 53 62 62 43 50 56 50 76 25 86 71 59 67 45 38 32 41 33 60 37 77 78 62 50

 DISA  76 82 88 91 63 31 75 91 76 75 83 54 68 86 57 79 64 62 73 48 59 69 56 79 29 88 79 68 73 48 43 54 57 41 66 46 79 76 76 61
 DISB  80 84 85 87 65 36 73 91 76 76 80 52 74 84 53 81 65 60 64 40 56 60 56 81 31 88 74 66 64 37 37 44 45 41 60 49 79 78 65 62
 DISC  75 82 84 86 61 35 72 89 68 71 78 53 75 65 50 77 55 58 62 39 50 55 37 74 29 86 76 61 63 40 33 39 42 33 48 37 69 68 63 50
 DISD  73 81 80 85 64 30 68 91 68 68 78 57 59 84 50 72 56 58 56 38 49 56 50 78 26 87 76 63 68 46 42 42 41 35 50 44 75 76 54 52
 DISE  72 81 84 88 61 31 76 88 70 72 80 48 76 87 45 78 53 62 62 43 50 56 50 76 25 86 71 59 67 45 38 32 41 33 60 37 77 78 62 50
 STOT  75 82 84 87 63 33 73 90 71 72 80 53 71 85 51 78 58 60 63 41 52 59 48 77 28 87 75 63 66 42 38 42 45 36 56 42 75 74 64 55
 934 SOC LEVL 3          TECR5005              11/07/86
PERCENTAGE OF CORRECT ANSWERS PER ITEM
NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY **

SCHL    41 42 43 44 45 46 47 48 49 50 TOTAL

 4052   80 60 80 80 65 70 25 35 65 70 67
 4100   26 73 73 71 73 65 50 50 67 69 59
 4120   30 70 30 90 60 55 15 75 80 60 68
 4121   22 61 38 72 ** 77 44 61 94 94 69
 4530   20 59 57 59 28 46 31 48 59 64 51
 4531   15 80 35 95 60 70 55 60 80 85 70
 4590   23 40 44 62 35 40 32 40 47 57 48
 4592   27 54 36 81 63 72 54 72 ** 72 68
 4630   36 80 82 91 61 76 50 64 65 80 68
 DISC   35 56 54 75 53 60 39 50 66 69 59

 4260   22 68 37 82 74 57 48 57 68 80 58
 4280   54 83 45 ** 80 96 67 80 ** 90 81
 4283   15 54 42 71 35 44 33 57 64 52 52
 4381   13 77 80 80 77 58 61 27 69 83 63
 4640   38 60 62 66 54 49 41 52 52 62 61
 4650   45 65 38 79 70 63 27 45 59 56 60
 4062   57 89 67 85 85 82 87 85 96 82 85
 4321   18 37 21 65 34 68 28 37 46 46 51
 4322   25 33 33 47 27 56 43 45 50 60 44
 4361   42 42 52 57 28 66 28 52 76 85 62
 4541   11 52 26 79 41 73 23 50 64 67 62
 4543   38 50 36 61 47 61 25 40 56 34 51
 DISD   31 58 46 71 53 60 41 51 63 63 59

 4053   21 25 68 71 46 43 21 50 75 78 46
 4061   19 52 52 80 66 71 61 57 57 47 60
 4113   30 45 90 70 60 60 80 55 65 60 62
 4210   44 65 39 88 76 67 58 60 67 67 73
 4230   26 36 53 74 46 55 33 50 49 60 50
 4271   70 78 81 89 89 67 75 81 81 75 79
 4360   35 41 61 64 53 48 30 38 30 53 55
 4410   53 70 66 83 66 70 46 67 74 66 72
 4580   28 45 48 83 58 63 30 50 65 63 56
 4620   19 58 34 82 47 67 34 59 72 63 57
 DISE   34 52 54 80 58 62 42 56 64 63 60

 DISA   45 61 53 82 64 65 50 61 74 68 66
 DISB   39 50 56 81 59 65 41 59 72 69 63
 DISC   35 56 54 75 53 60 39 50 66 69 59
 DISD   31 58 46 71 53 60 41 51 63 63 59
 DISE   34 52 54 80 58 62 42 56 64 63 60
 STOT   37 56 53 77 57 62 42 55 68 67 61
```

BOSTON PUBLIC SCHOOLS

DEPARTMENT OF EDUCATIONAL TESTING

CURRICULUM REFERENCED FINAL SOCIAL STUDIES - LEVEL 4

1985 - 1986

C.3	Describe various aspects of what is called culture	1
C.4	Identify the origins of the present population of the United	2
C.4	States and the immigration routes used by various groups, with	3
C.4	special emphasis on where current residents of Boston came from	4
C.5	Identify key events in US history, emphasis on events in N.E.	5
C.6	Give description of contributions of major persons in US history	6
C.45	Identify important governmental landmarks; why they are important	7
C.6	Give description of contributions of some major personalities in	8
C.6	U.S. history	9
C.7	Identify on map of US, major population centers & natural resource	10
C.8	Locate on globe or world map: Boston, the U.S., Canada, Mexico,	11
C.8	No. Am., the other 6 continents, 4 major oceans	12
C.9	Place the major features of the US on a blank map	13
C.10	Describe the basic functions of the 3 branches of the federal govt	14
C.10	executive (President), legislature (law-makers), & judiciary(ct)	15
C.13	Describe the election process for the Presidency	16
C.15	Locate Mass./N.E. on a map of US and on a world map or globe	17
C.16	Compare different kinds of maps of MA/NE & draw some conclusions	18
C.17	Identify major natural resources in MA/N.E.	19
C.18	Identify major features of MA/N.E. on a map of the area	20
C.23	Significance of major events in MA/N.E. and US history	21
C.24	Sequence of major events in MA/N.E. history (timeline)	22
C.6	Give description of contributions of major persons in US history	23
C.51	Location of 5 N.E. states and place them on a blank map	24
C.25	Major contributions of MA/N.E. history to history of the US	25
C.6	Give description of contributions of major persons in US history	26
C.28	Nat. Am. were original settlers, others came from diff. areas	27
C.33	Give examples of prejudice & discrimination based on race, sex,	28
C.33	ethnicity, religion, national origin, physical disability	29
C.38	Describe major features of economies of MA/N.E. and compare	30
C.41	Describe basic functions of 3 branches of government in ea. state	31
C.51	Location of 5 N.E. states and place on a blank map	32
C.52	Location of capitals of N.E. states & major cities of MA on map	33
C.56	Location of the equator, North & South Poles, the No/So hemisphere	34
C.56	and the East/West hemispheres and place them on a blank map	35
C.59	Become familiar w/maps of Boston, MA, & N.E.	36
C.13	Describe the election process for the Presidency	37
C.23	Significane of major events in MA/N.E. and US history	38
C.44	Recognize who is allowed to vote in local, state & nat'l elections	39
C.43	Identify some major elected & appointed officials of Bos., MA/NE	40

```
 944 SOC LEVEL 4          TLCR5005            11/07/86
PERCENTAGE OF CORRECT ANSWERS PER ITEM
NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY **

SCHL    1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 TOTAL

 4160  61 47 69 41 58 38 94 86 22 72 69 30 30 36 30 72 47 86 38 58 52 38 27 83 16 50 15 13 30 61 63 44 91 69 55 33 58 61 66 52 52
 4170  37 56 37 62 68 25 75 93 25 50 75 37 31 43 12 37 25 ** 25 81 31 25 12 62 18 43 37  6 37 68 62 50 87 68 62 25 43 75 18 56 47
 4173  33 27 55 51 62 29 81 81 40 81 74 70 33 55 25 66 31 68 29 92 48 25 11 85 25 22 66  7 18 37 62 74 92 77 62 18 44 44 44 37 51
 4220  93 73 60 80 53 66 93 86 73 86 80 80 66 46 53 80 73 86 66 66 46 53 46 60 26 46 ** 53 46 80 73 66 ** 86 53 20 73 53 66 46 66
 4221  39 56 39 26 43 21 69 73 21 30 47 43 26 39 17 43 26 69 30 34 21 26  4 13  8 17 17 17 13 34 26 34 56 65 26  8 39 60 13 26 33
 4570  77 77 94 91 77 61 97 94 75 97 94 88 69 44 41 86 60 91 94 77 44 58 75 80 77 27 30 36 61 77 61 75 80 80 72 61 61 72 11 69 70
 4571  35 35 27 51 48 46 80 80 35 58 75 64 35 46 51 61 35 87 41 62 30 35 17 70 22 33 37  9 33 64 58 54 87 67 58  8 64 32 48 40 48
 4010  85 55 82 70 88 85 97 97 55 73 85 88 73 79 55 94 64 97 97 79 73 61 61 94 64 70 88 85 73 79 67 82 97 79 79 76 88 91 88 79 79
 4240  56 46 68 72 70 65 89 87 67 74 87 55 44 53 58 63 40 89 62 75 60 56 40 81 60 62 65 46 62 74 62 77 87 74 65 51 70 65 53 67 65
 4241  21 30 34 52 43 52 69 82 26 47 60 60 39 17 26 65 43 73 56 56 43 47 17 52  8 34 56 13 21 56 56 56 91 91 52 21 34 47 52 34 46
 4310  40 14 33 40 48 25 55 74 11 48 59 55 11 11 14 51 40 62 25 48 40 11 37 59 18 18 29  7 25 62 48 62 81 66 37 18 44 18 51 81 39
 4311  21 78 31 42 89 36 69 47 15 94 73 63 73 63 42 36 26 85 73 84 73 26 26 57 42 26 10 15 15 42 52 42 84 73 42 52 52 42 78 42 51
 4370  14 70 43 37 66 33 92 81 14 96 81 66 29 77 74 33 44 77 85 77 70 66 44 77 25 18 88  3 18 66 51 62 85 88 37 22 59 40 37 44 55
 4371  93 21 96 87 81 84 ** 90 65 78 96 81 65 84 81 71 40 87 71 87 59 56 43 81 71 75 90 75 84 68 68 65 90 68 78 71 87 90 71 84 76
 4430  96 96 84 88 80 80 ** 92 92 92 84 96 69 88 61 92 73 ** 92 92 73 73 80 92 73 65 69 80 57 84 92 88 ** 96 84 88 84 84 ** 84 85
 DISA  54 50 59 60 65 52 86 84 44 72 78 65 45 52 45 65 47 86 59 71 51 45 37 73 40 42 53 32 43 65 60 63 87 75 59 39 62 58 53 57 58

 4030  54 29 37 45 54 25 87 91 66 91 70 62 58 58 79 41 54 91 79 87 54 29 62 75 75 50 58 45 58 66 75 79 87 79 58 62 54 66 70 37 62
 4031  18 43 31 18 37 43 93 75 37 56 68 43 37 12 12 56 31 68 43 43 56 37 12 50 31 12 18 12 25 50 50 43 75 62 50 62 56 56 56 62 43
 4081  86 83 93 51 51 72 86 86 58 79 89 32 68 65 58 86 65 89 75 82 65 48 62 68 44 75 86 62 58 79 93 72 72 89 75 62 58 75 75 82 73
 4082  60 62 52 60 43 47 82 78 47 56 78 73 52 30 21 82 60 82 65 82 47 52 39 86 26 34 69 47 60 82 69 60 78 56 73 69 56 69 56 56 60
 4290  60 47 45 49 45 24 77 79 18 67 67 58 30 20 24 54 32 79 41 54 37 22 13 62 33 35 49 11 43 64 49 64 79 60 52 33 54 49 73 45 47
 4560  77 85 78 57 62 55 93 90 31 83 81 73 52 44 59 62 81 96 70 93 65 29 60 91 32 73 68 45 39 81 77 67 95 83 70 73 67 47 67 73 68
 4561  33 11 27 44 72 77 94 77  5 94 66 61 38 22 27 38 50 94 66 33 38 16 33 83 16 16 27 27 16 55 22 44 77 94 66 38 55 55 77 72 49
 4690  30 31 34 40 48 34 72 72 30 63 68 53 30 11 29 49 37 80 34 66 35 29 19 53 17 38 49 30 29 46 49 46 76 56 44 34 47 44 39 45 43
 4070  81 98 92 ** 92 79 83 87 74 64 74 98 70 72 72 70 42 85 66 77 75 50 75 87 88 86 79 81 66 62 83 79 94 79 68 90 87 79 92 75 79
 4080  44 50 50 61 38 27 83 66 33 50 61 33 11 44 33 72 27 66 38 50 11 55 11 72 16 38 61 27 22 50 66 61 72 50 27 27 77 61 88 27 46
 4151  36 58 46 53 58 51 81 81 43 73 73 66 53 68 46 68 38 88 50 73 55 48 41 70 26 40 61 20 45 70 65 68 81 80 53 53 68 61 28 56 57
 4190  25 46 35 51 67 41 75 79 41 48 80 53 32 38 43 62 43 80 58 72 59 27 33 64 30 43 46 17 35 62 46 62 93 69 56 30 56 41 62 61 52
 4192  89 97 44 71 65 47 84 76 18 89 76 68 21 28 60 65 60 84 76 65 60 52 76 81 63 57 81 60 52 78 68 65 92 78 78 55 65 34 50 68 65
 4200  56 81 65 56 31 53 81 78 62 50 78 53 50 56 15 81 28 90 25 53 62 46 62 59 34 71 50 21 68 62 56 81 81 68 53 50 43 65 46 68 57
 4201  88 92 ** 88 85 96 ** 74 92 92 88 88 77 96 51 ** 85 ** 96 85 81 74 81 88 48 74 85 96 88 70 74 81 85 81 44 88 77 88 ** 66 83
 4670  61 33 42 42 33 19 51 90  0 42 76 66 19 23 28 47 33 95 23 57 42 28 19 47 28 47 76 14 47 66 76 52 85 57 19  9 33 14 28 28 43
 DISB  55 61 54 56 57 48 82 80 41 68 75 64 43 42 43 63 48 85 55 70 53 38 43 70 37 52 60 38 46 65 63 64 84 71 56 52 60 55 60 58 58

 4051  50 43 54 35 37 47 62 64 35 43 68 45 35 35 35 43 45 66 20 60 31 18 41 54 25 39 50 43 29 60 52 47 64 58 35 29 52 62 37 45 45
 4130  60 66 52 54 75 54 88 81 33 77 90 71 54 52 32 84 60 88 79 84 81 49 67 83 54 86 81 67 69 71 75 79 94 81 81 62 73 73 71 69 70
 4131  ** ** ** 95 ** ** ** ** ** ** ** 95 ** 90 90 ** 85 ** ** ** 95 95 ** ** 90 90 ** 85 85 ** 95 95 ** ** ** 95 ** ** 95 95 96
 4140  54 41 51 41 45 35 64 87 41 45 80 61 19 32 32 54 38 77 54 74 51 25 51 67 32 41 41 51 41 64 38 38 80 51 19 51 38 38 54 48 49
 4150  31 44 48 53 42 21 61 59 21 55 55 42 19 34 21 23 36 70 23 59 36 17 29 55 23 25 53 57 19 40 40 51 72 51 29 17 40 27 55 42 40
 4250  71 70 81 50 64 63 87 82 42 73 73 61 55 53 63 65 65 89 65 64 67 53 56 65 34 64 51 50 50 80 68 70 90 78 68 64 70 56 75 67 65
 4340  48 56 51 47 59 37 76 71 57 74 74 69 60 56 52 64 45 76 40 65 46 56 32 80 30 37 79 36 50 56 63 78 87 56 48 51 41 71 68 50 57
 4350  29 23 43 39 45 49 74 88 35 76 70 62 29 31 17 56 25 74 39 50 37 19 27 54  9 41 29  7 35 50 52 47 76 68 50 39 49 29 56 45 44
 4390  53 65 19 57 69 46 80 65 38 88 84 61 50 53 19 53 76 84 53 46 65 61 34 84 30 19 96 38 61 69 46 ** 96 84 73 26 50 57 ** 69 60
 4391  52 21 63 31 42 42 94 42 21 36 78 73 21 42 26 84 26 ** 31 ** 42  5 15 26 10 52 31 26 26 57 36 47 73 68 63 10 42 36 52 31 44
 4400  26 46 43 41 37 31 85 82 31 73 65 70 34 46 53 76 25 76 53 64 47 41 14 73 31 26 68 35 40 64 53 77 89 74 70 47 61 65 40 46 53
 4550  36 92 64 32 44 16 34 84 36 68 76 72 16 36 32 60 28 72 76 56 56 28 32 72 32 40 32 40 32 64 40 72 80 60 56 60 52 56 80 56 53
 4022  76 43 56 23 43 33 76 80 46 43 73 56 40 43 16 66 36 73 46 70 43 36 40 46 13 33 66 50 40 56 46 63 73 50 56 56 33 56 43 36 49
 4052  86 26 78 69 60 30 86 82 56 69 69 52 65 56 65 78 34 73 73 69 21 52 30 56 17 52 91 52 56 78 56 82 ** 78 43 43 43 69 86 52 61
 944 SOC LEVL 4            TECR5005             11/07/86
PERCENTAGE OF CORRECT ANSWERS PER ITEM
NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY **

SCHL     1   2   3   4   5   6   7   8   9  10  11  12  13  14  15  16  17  18  19  20  21  22  23  24  25  26  27  28  29  30  31  32  33  34  35  36  37  38  39  40 TOTAL

4100    71  53  72  67  77  50  85  81  42  86  89  73  59  43  39  59  56  91  63  78  57  57  37  63  34  68  65  36  62  73  71  68  87  79  75  45  66  55  67  79  64
4120    75  55  90  20  65  75  85  75  50  85  80  75  65   5  15  85  85  90  85  **  75  30  40  **  60  80  85  35  45  65  65  90  75  90  90  25  75  65  50  85  67
4121    18  36  54  18  36  18  45  72  36  81  63  45  36  18   0  45   9  54  27  63   0   9   9  54  18   0  81  27  27  45  45  63  90  54  54  27  63  63  54  36  40
4530    24  31  48  27  24  31  48  72  27  37  72  31  27  51  17  31  10  62  24  51  20  24  17  72   6  37  31  93  34  48  41  41  79  51  31  27  31  31  41  31  38
4531    54  63  72  63  63  54  **  81  36  54  90  54  27  27  27  54  18  **  81  90  18  54   9  90  36  36  81  18  36  72  72  72  90  **  90  36  54  27  90  81  59
4590    33  57  63  60  72  60  96  81  54  72  75  72  18  63  54  78  18  81  57  66  69  57  45  90  39  48  60  42  45  75  51  78  90  45  36  48  54  69  63  51  60
4592    **  75  **  62  75  87  **  75  37  **  87  50  37  25  50  50  37  **  25  **  37  37  12  87  37  62  50  12  37  62  **  87  **  75  50  37  75  87  87  50  64
4630    64  49  65  49  44  32  77  82  28  68  82  55  26  43  22  49  47  92  52  74  34  29  23  77  28  38  59  19  31  58  62  86  91  58  64  44  44  61  74  77  54
DISC    54  52  60  48  55  44  79  77  40  69  76  62  42  45  38  61  44  81  52  69  49  41  37  69  31  47  61  42  44  64  58  69  85  67  58  45  54  57  63  58  56

4260    57  34  68  68  42  82  80  65  65  91  80  60  34  82  34  74  37  85  60  71  77  20  34  77  54  57  31  51  62  62  62  68  85  60  74  42  40  31  65  25  59
4280    51  60  65  71  74  54  88  88  65  65  74  62  65  77  60  71  51  85  71  77  37  14  31  51  20  28  31  20  40  74  57  65  82  74  60  20  54  48  48  45  57
4283    52  48  50  55  55  41  78  77  38  67  75  65  51  35  25  61  50  80  51  55  35  37  41  55  32  47  44  35  32  58  60  62  87  72  61  40  42  57  55  57  53
4381    **  **  47  42  57  38  95  90  28  66  **  85  38  57  61  80  90  71  85  95  47  23  33  71  42  38  61   4  28  47  42  38  95  80  80  80  66  66  90  90  64
4640    38  30  46  47  30  21  73  59  17  61  65  56  30  11  24  39  30  70  49  62  42  23  28  61  29  35  35  24  25  48  32  69  83  60  37  28  42  37  39  44  42
4650    40  36  41  44  51  44  84  81  27  63  78  60  43  36  25  62  30  80  56  56  43  32  29  58  22  30  24  27  40  57  61  57  94  64  52  35  49  51  54  51  49
4062    93  74  77  77  80  67  87  83  70  80  83  77  64  61  58  80  51  90  77  80  77  48  38  80  61  74  90  48  61  83  80  64  90  74  74  64  67  74  80  74  73
4321    14  57  39  46  53  25  78  42  50  50  60  57  46  50  21  28  17  75  60  42  35  35  17  53  25  35  25  10  32  64  28  50  82  50  42  17  57  71  17  35  42
4322    60  51  51  46  70  13  77  68  25  68  89  77  55  50  46  74  50  74  62  77  32  32  13  75  34  22  34  22  22  37  34  79  89  68  53  27  51  53  41  65  52
4361    68  37  31  43  93  12  **  68  18  93  68  75  62  75  68  75  62  93  87  81  87  31   6  62  50  37  75   0  43  87  68  68  **  81  81  93  93  81  87  56  65
4541    40  37  70  32  52  32  92  70  27  72  80  75  35  42  27  62  57  85  52  75  20  50  20  82  10  37  62  27  22  40  55  75  82  77  35  35  50  45  50  32  50
4543    44  60  76  73  68  47  86  86  42  81  84  78  60  63  21  71  39  81  73  50  42  63  42  81  39  36  86  26  26  68  60  50  89  68  68  31  63  63  50  52  60
DISD    50  47  54  52  56  38  82  73  36  69  77  66  46  45  34  62  43  79  60  65  44  33  29  66  32  38  44  27  34  57  51  64  87  67  55  37  51  52  52  51  53

4053    25  37  34  28  31  28  65  62  22  45  68  60  37  31  11  34  20  80  40  51  20   8  25  51  17  17  28  20  37  42  40  48  80  57  42  37  48  37  40  45  39
4061    63  76  43  67  65  56  91  86  50  97  82  78  52  54  71  91  50  84  82  60  69  47  63  89  65  50  84  50  60  84  67  76  84  89  60  39  82  56  78  76  69
4113    76  32  52  52  64  35  82  70  38  52  70  55  35  47  50  73  44  82  41  58  47  29  47  41  38  52  44  35  52  67  52  55  82  64  58  38  67  73  64  73  55
4210    50   9  61  63  34  22  97  70  56  81  93  70  36  70  47  65  43  75  70  77  54  54  36  95  34  40  90  29  38  63  61  93  93  79  70  34  50  40  59  52  59
4230    34  41  61  51  61  53  83  85  46  62  81  60  42  40  31  65  35  87  52  66  59  34  33  70  28  42  55  30  41  66  57  61  87  70  61  40  54  56  52  44  54
4271    26  30  50  54  56  47  93  76  43  76  73  54  58  41  58  82  52  84  50  67  67  45  54  91  39  34  34  39  41  67  58  52  97  86  71  67  95  43  82  41  59
4360    **  82  71  78  46  78  96  78  85  85  85  57  42  14  39  53  67  **  82  82  82  82  60  75  32  85  82  42  50  89  96  57  96  71  67  78  35  89  75  71  71
4410    82  75  73  85  87  78  89  84  36  87  85  85  59  75  57  64  59  92  85  68  87  70  45  80  80  33  50  28  50  85  70  71  **  84  64  43  70  78  61  61  71
4580    53  54  60  45  52  43  83  75  26  81  82  67  67  44  47  66  46  86  55  61  55  43  38  76  39  36  37  39  56  68  58  58  89  73  60  38  63  49  59  45  57
4620    18  31  38  57  34  28  73  64  28  61  64  49  39  21  32  54  15  70  36  60  30  30  16  51  32  16  30  26  27  55  27  54  70  55  41  39  41  45  43  48  41
DISE    47  45  54  57  53  46  84  76  40  72  78  63  48  43  43  65  40  83  56  64  56  42  38  71  39  37  50  33  44  67  55  62  86  72  58  43  59  54  58  52  56

DISA    54  50  59  60  65  52  86  84  44  72  78  65  45  52  45  65  47  86  59  71  51  45  37  73  40  42  53  32  43  65  60  63  87  75  59  39  62  58  53  57  58
DISB    55  61  54  56  57  48  82  80  41  68  75  64  43  42  43  63  48  85  55  70  53  38  43  70  37  52  60  38  46  65  63  64  84  71  56  52  60  55  60  58  58
DISC    54  52  60  48  55  44  79  77  40  69  76  62  42  45  38  61  44  81  52  69  49  41  37  69  31  47  61  42  44  64  58  69  85  67  58  45  54  57  63  58  56
DISD    50  47  54  52  56  38  82  73  36  69  77  66  46  45  34  62  43  79  60  65  44  33  29  66  32  38  44  27  34  57  51  64  87  67  55  37  51  52  52  51  53
DISE    47  45  54  57  53  46  84  76  40  72  78  63  48  43  43  65  40  83  56  64  56  42  38  71  39  37  50  33  44  67  55  62  86  72  58  43  59  54  58  52  56
STOT    52  51  56  54  57  46  82  78  40  70  77  64  45  45  40  63  44  83  56  68  51  40  37  70  35  44  55  35  43  64  58  65  86  70  57  44  57  55  58  55  56
```

BOSTON PUBLIC SCHOOLS

DEPARTMENT OF EDUCATIONAL TESTING

CURRICULUM REFERENCED FINAL SOCIAL STUDIES - LEVEL 5

1985 - 1986

C.3,42	Voyages of discovery & colonization; sequence of events in history	1
C.4	Nature of earliest European settlements in No. America	2
C.9,82,83	Balance of powers: state vs. fed. govt., 3 branches of govt.	3
C.41	Outline major issues facing our nation today, i.e., nuclear arms	4
C.13	Major annexations of add'l territory to US & changing map of growth	5
C.73	Identify concentrations of econ. activity in diff. parts of US	6
C.20,68,69	Plessy v. Ferguson; origins of prejudice and discrimination	7
C.37,45,46	Causes, major events & effects of civil rights movement	8
C.42	Sequence of major events in US history; place them on a timeline	9
C.47	Identify major regions of US; place ea. state in one of them	10
C.53	Place countries, continents, and bodies of water on a blank map	11
C.54	Label Equator, Artic Circle, latitude, No hemisphere on blank map	12
C.3	Describe European expansion into the New World	13
C.4,42,46	Contributions of important persons in US history/see #2&9	14
C.6,42,46	Trace origins of rebellion of Am. colonists/British rule/see #2&14	15
C.9,82	Balance of powers; state vs. govt. and 3 branches of government	16
C.17,84	Major features of Emancipation Proc. & effects & fed. elections	17
C.85	List qualifications of voting in national elections	18
C.11	Describe institution of slavery in US & Fugitive Slave Law	19
C.25	Describe destructive effect of settlers on Indians' way of life	20
C.22	Describe emergence of labor unions and conflict with management	21
C.27	Arms buildup before WWI, major events of war, US world&colonial pwr	22
C.30	Describe major effects of Great Depression & Roosevelt's New Deal	23
C.31	Describe emergence of totalitarianism in Germany, Italy, Russia	24
C.33	Describe effects of Hitler's murder of 6 million Jews	25
C.37	Describe the causes, major events, and effects of the civil rights	26
C.37	movement of the 1960's	27
C.82	Power & functions of 3 branches of govt & how laws are made	28
C.85,87	Who was allowed to vote @ points in US history; qualifications	29
C.45	Overall contributions of diff. racial, ethnic, etc. groups in US	30
C.17	Major features of Emancipation Proclamation and its effects on US	31
C.10	Identify "unfinished business" of original US Constitution	32
C.9,82	Balance of powers; state vs. govt. and 3 branches of government	33
C.19	Describe abolition of slavery and the main events of the	34
C.19	Reconstruction era	35
C.85	List qualifications for voting in national elections	36
C.16,45	Evolution of more effective ways of moving people & goods/ See #29	37
C.79	Supply & demand; demand for or shortage of product affects price	38
C.34	Identify effects of development of atomic weapons on world affairs	39
C.41	Outline major issues facing our nation today, i.e.; national debt	40

```
 954 SPL LEVL 5          TECR5005              11/07/86
PERCENTAGE OF CORRECT ANSWERS PER ITEM
NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY **

SCHL    1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 TOTAL

 4160  88 84 84 48 ** 92 52  8 92 84 72 ** 96 44 92 80 92 72 80 52 88 ** 76 60 72 64 88 60 56 88 44 48 44 40 60 40 92  4 ** ** 70
 4170  70 41 41 29 94 70 23 35  0 47 70 82 58 23 11 58 47 47 35  0 41 64 11 23 41 29 11 64 52 23 23 35 23 35 47 29 41 17 64 35 40
 4173  85 45 85 30 95 95 30 20 60 70 75 85 80 40 50 55 90 50 40 50 45 80 40 20 50 50 45 55 40 35 15 40 45 35 80 45 20  5 45 55 51
 4220  81 62 37 25 ** 93 12  6 50 75 68 87 81 12 68 50 75 68 25 12 62 68 12 50 18 56 56 68 62 12 56 37 37 31 37 12 81 50 56 50 50
 4221  85 52 76 61 95 95 19 19 28 47 61 80 66 42 38 33 80 14 19 28 52 80 33 28 42 38 33 57 42  9 38 28 28 47 42 47 14  0 52 52 45
 4570  61 71 58 48 ** 87 28 23 30 66 82 92 89 43 76 58 53 64 53 41 79 79 43 38 53 38 51 51 48 17 51 30 53 48 48 38 23 23 66 64 54
 4571  85 66 68 60 95 93 16 27 58 79 93 93 75 25 70 60 77 72 45 52 85 89 45 54 62 58 68 81 58 47 56 47 52 64 58 62 68 43 85 87 64
 4010  42 38 23  3 92 84 11 19  7 46 69 88 38 19 76 46 57 38 34 30 61 80 11 23 34 26 23 42 26 19 30 42 23 65 42 50 26 15 42 46 40
 4240  46 52 65 52 91 78 26 54 46 64 68 73 64 56 69 61 65 49 20 36 60 84 49 41 38 49 46 56 47 38 52 52 47 43 36 53 20 27 65 52 52
 4241  87 75 ** 62 ** ** 62 50 62 50 75 ** 75  0 ** 12 50 62 62 50 75 75 62 12 25 37 37 62 37 50 37 25 50 62 50 37 75  0 ** 75 58
 4270  ** 84 78  0 ** 94 21 89 ** 94 84 94 73  0 73 94 ** 89 78 94 68 ** 94 78 89 89 89 89 73 89 ** 68 78 68 57 78 89 10 94 ** 78
 4310  ** 86 53 80 ** 86 66 66 66 60 86 93 66 73 80 46 80 66 60 73 73 86 46 86 73 ** 86 86 73 66 80 60 53 53 73 73 66 66 86 80 74
 4311  95 47 52 85 ** 80 57 71 42 47 57 95 76 19 80 61 85 76 71 28 71 90 66 47 71 61 42 85 57 66 57 47 38 47 42 23 80 66 80 80 64
 4370  81 87 93 81 ** 93 18 75 75 81 87 93 87 62 62 87 81 81 75 75 68 87 75 93 81 81 75 87 81 62 81 81 68 87 25 75 75 81 75 93 77
 4371  95 91 73 91 ** 91 13 62 82 82 ** 95 95 17 ** 78 95 ** 73 13 86 ** 60 56 86 78 56 78 65 39 86 56 78 73 47 13 73 60 ** 95 74
 4430  ** ** 91 91 91 75 83 66 91 75 83 91 91 66 91 75 91 83 83 83 83 91 75 83 75 83 50 66 66 75 91 58 75 75 75 58 75 50 91 91 80
 DISA  75 64 65 51 96 87 29 42 52 67 77 88 74 36 71 61 74 62 48 42 69 85 48 47 55 55 53 66 53 43 54 47 49 53 49 47 50 31 73 70 59

 4030  ** 86 73 86 ** ** 86 86 80 86 93 ** 93 ** 60 86 80 86 86 93 86 ** 53 73 86 86 ** 93 93 80 60 40 86 66 ** 13 ** 53 ** 86 83
 4031  92 84 69 92 ** 92  0 84 92 84 69 ** 76  0 ** 53 92 84 76 92 92 ** 92 53 61 61 69 ** 76  0 69 69 84 92 46  7 69  7 84 76 71
 4081  ** ** ** ** ** **  8 92 ** ** 92 ** ** 96 ** ** 92 96 ** 96 ** ** ** 88 96 96 ** 96 ** ** ** 64 ** ** 40 52 28 32 ** ** 89
 4082  ** ** ** ** ** ** 93 93 37 50 62 87 56 ** 87 31 ** 25 ** 93 ** 68 ** 18 75 ** 50 62 50 87 37 ** 50 93 93 93 81 25 62 43 75
 4290  82 62 53 37 93 81 17 37 44 44 62 89 48 34 70 55 56 58 37 22 68 84 32 68 34 50 41 60 46 18 46 51 53 39 36 62 46 22 79 36 51
 4560  88 91 66 51 97 88 13 31 53 57 86 95 75 33 55 60 80 42 51 31 62 80 28 57 66 71 71 71 80 57 40 40 48 51 57 44 68 48 91 71 61
 4561  65 70 50 25 ** 95 20 55 50 55 75 85 70  5 50 55 70 35 35  0 55 75 45 40 45 50 40 65 50 15 40 25 30 35 35 25 25 10 80 65 47
 4690  77 54 28 17 90 77 17 17 22 31 58 71 59 10 10 25 32 31 36 22 36 63 24 10 32 36  8 37 33 16 31 18 21 21 36 35 16 24 39 43 34
 4070  66 51 60 63 ** 75 18 42 42 69 57 81 57 21 63 54 78 54 48 45 72 69 33 33 51 39 45 66 57 36 57 36 39 60 45 51 63 42 51 78 54
 4080  80 71 80 71 76 71 28 66 80 80 66 71 71 14 66 71 71 57 23 33 57 76 23 28 76 47 19 76 47 38 61 38 57 38 66 47 57 28 61 71 56
 4151  84 69 62 56 98 84 34 55 54 63 69 97 81 23 66 77 66 56 50 44 80 77 52 40 65 63 73 83 43 36 63 50 45 47 62 55 38 30 79 72 61
 4190  72 46 59 79 94 90 62 72 31 61 77 85 42 72 40 68 74 59 55 72 83 79 53 44 74 42 46 57 59 51 57 42 62 61 62 46 62 40 74 59 62
 4192  88 40 32 72 88 68 32 24 48 24 20 92 88 20 20 24 52 72 28 16 68 80 44 40 40 36  8 52 36  4 56 28 28 32 32 44 24  8 64 36 42
 4200  93 93 ** 93 ** ** 87 87 81 81 ** ** ** 68 93 ** 93 93 81 68 93 93 87 81 81 87 ** 87 62 81 93 68 75 75 87 93 93 62 ** 93 87
 4201  68 88 64 76 96 96 88 72 52 ** 68 76 80 84 80 40 48 60 52 20 60 52 56 44 60 64 40 80 36 92 40 52 68 40 56 64 52 44 72 68 63
 4670  84 73 68 57 ** 89 10 84 10 31 47 94 68  0 78 89 94 84 31 26 73 84 47 57 31 57 78 63 26 10 63 57 63 57 78 78 89 94 ** ** 63
 DISB  81 68 60 58 95 85 33 53 48 58 67 87 68 38 58 59 67 56 50 42 70 77 47 45 57 56 50 67 52 40 53 44 51 50 53 50 49 34 73 63 58

 4051  96 53 78 64 ** 64 53 57 53 71 57 64 32 53 14 57 64 17 50 60 67 89 82  7 71 85 89 78 46 28 78 60 42 35 39 32 67 17 78 50 57
 4130  85 79 44 58 97 85 26 29 35 35 73 85 67 47 67 67 67 44 50 14 44 76 32 14 32 47 38 47 35  8 47 29 41 38 61 35  8 11 64 55 48
 4131  50 79 37 20 95 83 16 41 20 45 45 95 54 20 25 20 58 37 20 33 75 75 16 29 37 41 29 20 33 16 37 25 12 37 50 33 25 12 70 33 40
 4140  44 25 40 18 96 70  7 14  3 33 29 77 70 11 11 25 40 22 22  7 44 51 40 29 44 37 22 44 11 14 22 22 33 48 40 33 22 40 29 33 40
 4150  65 63 63 60 94 84 52 60 65 50 55 81 60 39 36 57 65 63 31 18 57 76 52 65 63 39 55 65 60 34 31 39 52 57 31 34 26 31 68 47 54
 4250  88 88 92 82 98 94 70 86 82 64 90 86 94 78 68 90 92 86 56 62 84 90 54 33 64 56 49 62 54 35 60 43 56 25 49 47 41 60 78 72 69
 4340  59 52 36 12 95 76  7 29  8 38 45 77 59  5 19 36 47 32 18 28 63 77 22 36 33 22 19 46 29 16 36 26 28 28 28 40 19 21 42 47 36
 4350  76 44 42 30 93 78 16 16 25 39 65 85 66 14 50 48 59 48 39 14 64 71 41 24 49 39 40 58 31 22 52 46 32 37 47 39 37 28 55 68 46
 4390  ** ** 86 52 ** 95 60 34 86 95 86 95 91 78 52 ** 82 65 73 65 91 ** 56 60 78 69 47 43 73 60 65 34 86 56 52 43 34 21 69 78 70
 4391  ** 93 40 33 ** 80  6 40 26 53 86 86 66 26 66 53 66 60  6 13 73 80 26 46 40 46 26 53 13 13 46 40 40 40 40 26 20 33 60 40 47
 4400  85 63 48 47 98 90 10 21 35 73 78 98 78 17 30 60 75 45 29  7 65 87 39 34 59 42 29 70 30 31 44 40 39 57 47 30 34 14 70 48 50
 4550  96 96 51 ** ** **  7 81 77 66 92 88 51  3 22 62 40 77 44 11 59 96 33  0 92 74 37 96 59 37 66 22 44 74 62  7 14 14 62 55 57
 4022  50 10 60 20 ** 80  0 40  0 20 10 90 50 40 20 20 50 60  0  0 60 70 30 60 20 20 40 40 20 20 40 40 50 10 50 20 30 40 30 50 36
 954 SOC LEVL 5          TECR5005              11/07/86
PERCENTAGE OF CORRECT ANSWERS PER ITEM
NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY **

SCHL     1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 TOTAL

 4352   73 66 93 60 93 93 20 73 86 80 86 ** 86 66 93 66 93 73 46 20 80 86 60 20 40 46 40 46 66 53 86 73 13 40 46 33 60 40 80 86 64
 4100   90 79 86 77 98 93 16 61 77 67 77 91 76 39 76 65 80 71 51 44 75 92 60 35 66 56 40 65 50 58 40 66 50 61 45 41 33 33 76 60 63
 4120   95 57 95 76 ** 90 33 28 90 57 52 95 66  0 57 23 95 57 76 47 76 80 19 19 57 85 42 90 85 66 90 38 38 57 47 76 19  0 76 57 60
 4121   ** 72 36 27 ** 72 18  0 18 72 81 ** 54  9 90 27 ** 54  9 18 27 90  9 45 36 27 63 54 36 18 54 54  9 27 45 63 27 36 81 45 47
 4530   66 57 47 38 ** 85 14 23 47 61 85 85 85 66 28 28 76 57 23 52 71 80 42 33 47 33 57 52 47 14 61 23 57 47 66 42 28 23 66 57 52
 4531   88 58 58 58 94 64 17 52 41 64 76 76 70 17 52 64 70 64 52  5 64 64 23 23 35 29 11 64 17 23 52 35 17 29 47 11 35 52 64 35 47
 4590   78 58 82 75 ** 95 46 75 90 87 78 85 80 21 75 63 80 60 29 41 75 82 80 51 85 56 60 56 24 51 58 43 58 46 41 34 46 29 70 70 63
 4592   ** ** ** ** ** ** ** ** 50 50 ** ** 75 50 50 75 **  0 50 50 25 ** ** 25 50  0 25 75 50 75 25 50 ** 75 **  0 75 50 75 75 67
 4630   93 84 89 80 95 87 87 78 77 74 84 81 80 43 71 77 84 83 60 51 59 63 63 40 56 65 53 65 69 53 62 51 63 51 53 57 60 56 77 66 68
 DISC   80 66 63 54 97 85 30 46 50 59 70 86 70 31 49 57 70 56 40 30 66 80 46 33 55 48 41 60 42 34 51 42 43 45 46 38 34 29 65 57 54

 4260   89 75 89 75 ** 96 65 51 72 62 79 72 82 27 72 75 79 65 51 65 89 82 44 48 58 55 48 68 34 34 48 55 41 58 55 62 34 20 55 79 63
 4280   84 88 96 56 ** 96 ** ** ** 96 84 ** 88 84 ** 80 64 88 76 24 96 96 92 92 92 72 52 68 80 96 64 28 48 64 40 88 92 52 96 44 78
 4283   76 49 41 58 96 90 56 49 35 54 70 90 62 49 52 62 68 58 25 56 66 70 27 45 52 35 33 62 43 39 64 45 43 37 64 50 68 50 78 76 56
 4381   80 20 20 60 ** 80 13 20 20 26 53 86 66 13 53 60 46 26 20  6 33 73 26 13  6 26 26 73 20  6 40 66 26 33 26 60 33 26 40 53 39
 4640   55 40 47 46 98 85 16 16 19 60 64 78 55 22 22 52 60 50 27 38 64 76 33 17 51 35 25 59 29 55 33 29 42 38 36 45 23 19 52 41 44
 4650   58 56 55 46 93 79 37 32 30 62 62 86 74 43 44 53 66 51 43 40 69 80 45 44 62 55 48 60 55 46 53 58 51 61 59 52 50 37 75 77 56
 4062   82 76 94 91 ** 94 79 79 91 85 97 ** 88 52 94 91 97 ** 94 88 91 91 79 70 79 82 70 79 76 79 ** 91 79 82 82 91 ** 91 ** 88 87
 4321   90 50 50 27 95 86  4 22 40 50 72 81 72 22 27 63 40 40 36 27 40 90 45 40 72 54 13 77 27 68 27 31 31 54 36 36 13  9 54 63 47
 4322   68 62 50 25 89 75 18 14 27 54 64 75 64 20 27 31 62 58 27 22 54 75 41 35 52 35 20 41 35 31 54 39 37 25 41 31 16 33 66 45 43
 4361   82 88 64 17 ** 76  5 70 52 35 58 70 70 41 76 52 52 41 52 58 58 70 52 47 58 17  5 52 58 52 70 52 41 47 47 41 70  5 82 64 54
 4541   69 21 26 30 95 78 30 56 34 30 60 86 69 21 26 47 69 43 39  8 65 86  8 30 39 56 39 56 43 26 43 39 43 43 43 39 13 26 69 52 45
 4543   68 72 40 36 ** 80 16  8 44 56 76 92 48 16 84 28 56 24 20  8 56 64 24 28 40 32 28 44 40 16 36 32 36  8 48 16 24  8 60 64 41
 DISD   70 56 55 48 96 84 37 38 41 59 69 84 68 35 49 56 65 55 40 39 67 79 42 40 57 46 35 60 45 47 52 46 45 46 50 50 44 33 69 62 54

 4353   68 27 20 34 93 79 27 20  3 37 75 89 58 13  6 34 55 37 27 27 62 55 51 20 34 20 27 48 34  0 34 48 17 13 27 31 24 31 48 37 37
 4061   86 72 48 44 ** 88 20 23 34 72 74 90 83 23 69 60 76 34 44 18 53 86 39 44 60 48 37 69 44 46 39 51 62 46 62 39 53 32 81 67 55
 4113   ** ** ** 90 ** ** 42 23 23 47 42 95 71 14 28 38 71 47 23 28 66 80 42 76 42 61 71 52 23 33 42 38 38 61 38 42 66 38 76 80 56
 4210   72 45 55 30 ** 92 22 20 20 62 92 95 87  7 80 50 80 55 27 40 42 90 40 12 57 55 42 50 35 15 37 27 45 40 37 30 47 17 82 32 49
 4230   55 55 38 41 95 87 14 18 28 52 71 85 65 22 42 46 52 47 30 14 55 81 38 33 47 43 45 62 52 15 45 48 33 43 42 46 19 24 60 60 46
 4271   80 65 85 82 97 97 42 28 40 77 85 97 94 48 62 65 82 80 48 34 77 94 54 45 91 34 80 68 57 31 57 51 54 40 54 57 51 20 88 60 64
 4360   77 63 72 75 97 94  2 63 69 83 63 88 83 13 75 30 83 75 30  5 66 80 77 38 77 44 19 55 50 41 52 47 52 50 38 38 66 30 72 55 57
 4410   65 59 57 54 95 85 35 68 82 59 79 93 75 26 29 67 76 57 40 50 67 75 59 62 65 68 62 64 37 28 28 35 51 59 56 34 48 20 76 54 57
 4580   82 51 49 43 89 82 27 38 38 57 74 83 80 29 76 50 64 56 44 28 63 75 49 48 62 62 52 64 55 52 49 40 42 50 45 47 49 35 66 65 55
 4620   50 46 42 27 96 75 24 25 32 45 59 69 50 18 33 54 51 36 24 20 51 66 44 25 36 20 28 54 28 23 35 49 43 37 42 30 23 19 66 47 41
 DISE   68 55 51 46 95 85 24 32 38 57 72 85 71 22 50 51 64 50 34 25 59 77 47 38 55 45 45 60 43 28 42 44 43 44 45 40 39 26 69 56 50

 DISA   75 64 65 51 96 87 29 42 52 67 77 88 74 36 71 61 74 62 48 42 69 85 48 47 55 55 53 66 53 43 54 47 49 53 49 47 50 31 73 70 59
 DISB   81 68 60 58 95 85 33 53 48 58 67 87 68 38 58 59 67 56 50 42 70 77 47 45 57 56 50 67 52 40 53 44 51 50 53 50 49 34 73 63 58
 DISC   80 66 63 54 97 85 30 46 50 59 70 86 70 31 49 57 70 56 40 30 66 80 46 33 55 48 41 60 42 34 51 42 43 45 46 38 34 29 65 57 54
 DISD   70 56 55 48 96 84 37 38 41 59 69 84 68 35 49 56 65 55 40 39 67 79 42 40 57 46 35 60 45 47 52 46 45 46 50 50 44 33 69 62 54
 DISE   68 55 51 46 95 85 24 32 38 57 72 85 71 22 50 51 64 50 34 25 59 77 47 38 55 45 45 60 43 28 42 44 43 44 45 40 39 26 69 56 50
 STOT   75 62 59 52 96 85 30 42 46 60 71 86 70 32 54 56 68 55 42 35 66 79 46 40 56 50 44 62 46 37 50 44 46 47 48 44 42 30 69 61 55
```

BOSTON PUBLIC SCHOOLS

DEPARTMENT OF EDUCATIONAL TESTING

CURRICULUM REFERENCED FINAL SOCIAL STUDIES - LEVEL 6

1985 - 1986

C.36	Locate the Equator, Tropic of Cancer, Tropic of Capricorn, Arctic Circle, Antarctic Circle, North and South Poles, latitude and longitude lines, No/So/E/W hemispheres on a blank map	1
C.36		2
C.4	Describe way in which humans obtained food prior to agriculture	3
C.9	Identify modern counties located on sites of ancient civilizations	4
C.3	How archeologists pieced together story of early human evolution	5
C.8	Acquire basic knowledge of location and narrative history of ancient civilizations, including role of outstanding individuals and groups	6
C.8		7
C.14,15, 27	Summarize importance of major events; describe major features of Middle Ages; distinguish between different economic systems	8
C.14	Summarize importance of major events, i.e., discovery of fire	9
C.13	Give major contributions of at least 10 historical figures	10
C.14,15	Summarize importance of major events, describe major features of Middle Ages	11
C.15	Describe major features of Middle Ages in diff. parts of E. hemis.	12
C.16	Describe major features of the Renaissance in Europe	13
C.14	Summarize importance of major events, i.e., invention of writing	14
C.8	Acquire basic knowledge of location & narrative hist. of anc. civ.	15
C.13	Give major contributions of at least 10 historical figures	16
C.14,18	Summarize major events; Identify holidays, customs of E. hem. cult.	17
C.8	Basic knowledge of location & narrative history of anc. civiliz.	18
C.14,15	Summarize major events; major features of Middle Ages	19
C.27	Distinguish between different economic systems	20
C.13	Give major contributions of at least 10 historical figures	21
C.39	Locate other major physical features of the Eastern Hemisphere	22
C.39	for example: Sahara Desert, Himalaya Mountains, Alps	23
C.40	Locate major countries of the Eastern Hemisphere	24
C.37	Place the 7 continents and 4 major oceans on a blank map	25
C.42	Identify some major natural resources of regions	26
C.42	each continent	27
C.42		28
C.42		29
C.36,37	Locate the Equator, Tropic of Cancer, etc.; Place 7 continents and 4 major oceans on a blank map	30

C.36,37	Locate the Equator, Tropic of Cancer, etc.; Place 7 continents and 4 major oceans on a blank map	31
C.36	Locate the Equator, Tropic of Cancer, Tropic of Capricorn, Arctic Circle, Antartic Circle, North & South Poles, latitude and longitude lines, N/S/W/E Hemispheres on a blank map	32
C.36		33
C.36		34
C.8,14	Acquire basic knowledge of location & narrative history of ancient civilizations; Summarize importance of major events	35
C.8,14		36
C.13	Give major contributions of at least 10 historical figures	37
C.14	Summarize importance of major events, i.e., Code of Hammurabi	38
C.13	Give major contributions of at least 10 historical figures	39
C.13		40
C.8	Acquire basic knowledge of location & narrative history of ancient civilizations, include role of outstanding individuals	41
C.8		42
C.19	Identify instances of prejudice & discrimination in ancient world	43
C.30	Development of systems of money from simple barter to exchange	44
C.8	Basic knowledge of location & narrative history of anc. civiliz.	45
C.8,14,18	Knowledge of location & narrative hist. of ancient civiliz., Summarize importance of major events, Identify some customs, holidays, festivals, etc. of Eastern Hemisphere cultures,	46
C.8,14,18		47
C.8,14,18		48
C.37	Place the seven continents & four major oceans on a blank map	49
C.39	Locate other major physical features of the Eastern Hemisphere	50

```
 964 SUC LEVL 6         TECK5005              11/07/86
PERCENTAGE OF CORRECT ANSWERS PER ITEM
NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY **

SCHL     1   2   3   4   5   6   7   8   9  10  11  12  13  14  15  16  17  18  19  20  21  22  23  24  25  26  27  28  29  30  31  32  33  34  35  36  37  38  39  40

 2130   86  62  29  24  55  56  60  43  35  37  56  51  45  42  55  49  33  64  41  32  70  89  88  60  84  83  28  50  50  83  72  34  52  44  92  55  58  55  12  53
 2170   94  86  20  61  70  81  61  82  70  74  54  63  65  50  61  55  20  54  65  42  75  96  85  49  91  88  37  45  60  63  77  55  75  30  90  68  86  77  12  68
 4570   80  77  22  67  51  70  54  74  74  93  35  32  48  22  25  51  32  29  41  29  25  74  64  77  77  80  25  64  41  29  58  48  48  25  77  54  54  38  25  38
 2060   94  57  63  63  73  89  57  57  73  36  73  52  42  36  89  68  52  52  47  52  52  94  84  52  **  94  57  84  84  57  73  31  68  68  73  47  63  73  42  84
 2070   87  68  41  32  81  72  64  61  69  74  39  65  72  19  63  56  29  80  45  51  82  87  80  50  89  85  24  61  44  56  81  54  53  38  87  67  68  63  13  67
 2240   94  75   5  25  48  53  50  29  17  32  26  48  35  15  42  41  23  71  24  12  55  78  67  58  73  74  19  39  50  52  58  35  42  33  76  57  35  43   8  58
 DISA   89  72  27  39  65  68  59  57  53  58  46  56  55  32  56  52  28  65  45  37  68  88  80  55  85  83  28  52  51  62  73  45  56  37  86  61  63  60  14  61

 2110   90  73  54  43  73  75  73  50  49  39  37  45  43  30  47  56  39  47  26  32  50  83  73  35  73  84  18  60  77  50  56  41  56  39  90  45  41  33  15  75
 2120   98  61  72  73  79  79  52  67  52  73  47  66  52  51  70  67  27  70  36  38  69  91  75  48  83  91  29  60  70  47  70  36  61  36  94  61  72  35  16  64
 2140   95  57  33  60  82  84  70  60  44  41  44  73  48  44  71  60  34  68  36  30  67  92  89  50  85  83  31  50  58  66  79  40  57  51  91  59  47  60   7  61
 2200   96  71  25  43  78  59  40  43  40  43  33  67  23  18  54  50  28  40  29  33  58  83  69  40  77  77  38  44  43  50  61  38  42  31  77  50  38  41  14  54
 2950   92  74  49  63  86  83  64  52  64  71  47  55  43  35  59  54  27  53  36  37  71  90  84  50  87  83  39  63  56  70  68  51  66  61  88  57  56  64  19  72
 DISB   94  67  43  57  81  77  60  54  51  55  42  63  41  35  61  56  30  56  34  34  65  89  80  46  83  83  34  55  57  60  68  43  57  47  87  55  50  52  14  65

 2330   89  80  46  51  61  64  57  41  46  50  53  54  22  10  52  50  30  76  31  23  56  87  81  42  81  86  19  52  55  57  68  37  61  38  90  59  43  62  16  55
 2080   88  51  20  24  66  76  50  77  21  23  47  55  33  25  49  34  17  29  44  21  68  93  77  40  88  88  35  62  59  46  59  35  60  34  86  57  32  37  14  55
 2180   94  78  47  61  78  78  71  78  45  64  56  60  53  38  56  51  41  53  33  17  49  87  76  48  78  76  25  66  74  51  54  40  46  48  87  61  49  48  17  50
 2090   90  56  31  55  64  76  68  56  40  43  44  52  33  30  52  54  39  52  38  38  66  90  83  52  83  79  39  44  61  53  74  52  50  29  89  56  61  59  13  65
 2190   87  70  22  38  70  69  51  65  52  55  34  52  37  28  56  54  21  64  44  30  54  89  72  46  89  77  27  45  57  57  67  41  54  37  92  59  41  41  15  44
 2260   80  59  19  32  51  40  45  32  22  22  41  35  11   4  41  33  41  48  20  20  37  77  64  35  85  70  19  43  51  58  54  24  59  33  79  51  16  29  17  33
 DISC   89  70  34  45  66  69  58  58  41  47  47  53  32  22  52  48  30  59  36  25  56  88  77  44  83  81  26  53  59  54  64  39  55  37  88  58  42  49  16  51

 2010   96  71  15  57  72  76  73  78  84  54  51  47  74  38  54  59  35  62  50  28  53  91  78  43  85  85  25  55  65  63  68  43  65  37  89  55  56  57  15  73
 2040   85  79  23  51  67  79  69  66  74  57  26  49  61  36  68  45  30  57  53  42  57  88  73  45  79  93  26  43  49  59  65  43  57  45  89  56  68  39   6  53
 2050   89  68  23  54  67  69  47  46  31  30  32  42  48  20  52  50  23  44  32  30  47  84  65  37  80  79  23  61  61  55  66  38  53  38  89  49  50  42  15  62
 DISD   90  72  21  54  68  74  62  62  60  46  35  46  60  30  57  51  29  53  44  33  52  87  72  41  81  85  24  53  58  58  66  41  58  40  89  53  57  45  12  63

 2100   85  59  30  32  71  73  53  37  29  29  55  60  25  25  54  36  21  41  22  25  72  86  63  46  77  88  35  59  83  56  70  42  52  37  84  53  42  41  11  62
 2270   96  87  71  75  84  85  68  53  76  76  64  63  41  31  23  76  26  74  27  52  55  91  80  43  89  89  54  72  75  56  61  71  70  42  93  55  44  35  11  83
 2980   93  91  64  61  85  90  75  84  73  54  71  70  70  40  77  61  41  78  70  42  79  95  88  61  95  92  61  76  73  77  83  59  70  61  93  79  88  67  20  89
 4360   92  92  80  95  89  92  72  84  86  96  70  60  80  61  76  64  10  66  55  55  90  89  86  58  90  86  30  70  66  67  72  76  41  41  95  69  86  78   9  87
 DISE   91  82  60  64  82  85  67  63  65  61  65  64  52  37  55  60  27  65  43  43  72  90  79  52  88  89  47  69  75  64  72  61  60  46  91  64  63  53  13  80

 DISA   89  72  27  39  65  68  59  57  53  58  46  56  55  32  56  52  28  65  45  37  68  88  80  55  85  83  28  52  51  62  73  45  56  37  86  61  63  60  14  61
 DISB   94  67  43  57  81  77  60  54  51  55  42  63  41  35  61  56  30  56  34  34  65  89  80  46  83  83  34  55  57  60  68  43  57  47  87  55  50  52  14  65
 DISC   89  70  34  45  66  69  58  58  41  47  47  53  32  22  52  48  30  59  36  25  56  88  77  44  83  81  26  53  59  54  64  39  55  37  88  58  42  49  16  51
 DISD   90  72  21  54  68  74  62  62  60  46  35  46  60  30  57  51  29  53  44  33  52  87  72  41  81  85  24  53  58  58  66  41  58  40  89  53  57  45  12  63
 DISE   91  82  60  64  82  85  67  63  65  61  65  64  52  37  55  60  27  65  43  43  72  90  79  52  88  89  47  69  75  64  72  61  60  46  91  64  63  53  13  80
 STOT   91  72  36  51  72  73  60  58  52  52  46  56  45  30  56  53  29  59  39  33  62  88  78  47  84  83  31  55  59  59  68  44  57  41  88  58  53  52  14  62
 964 SOC LEVL 6          TECR5005            11/07/86
PERCENTAGE OF CORRECT ANSWERS PER ITEM
NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY **

SCHL    41 42 43 44 45 46 47 48 49 50 TOTAL

 2130   50 55 41 42 57 67 61 95 80 52 56
 2170   91 74 41 40 61 92 63 95 80 46 65
 4570   64 41 25 45 77 74 51 83 61 32 52
 2060   78 68 73 52 68 89 68 89 63 68 66
 2070   78 70 36 48 84 91 53 93 83 40 62
 2240   43 39 21 17 43 71 34 74 41 50 44
 DISA   68 61 37 40 65 86 55 90 73 46 58

 2110   62 45 22 32 49 86 49 92 58 33 53
 2120   79 51 26 23 27 89 60 91 75 29 60
 2140   89 60 34 43 56 92 68 93 68 41 60
 2200   57 38 27 26 30 79 50 85 67 41 49
 2950   77 64 30 53 71 88 54 91 62 53 62
 DISB   75 54 29 39 51 87 57 90 66 43 57

 2030   61 41 24 33 61 86 54 92 77 49 54
 2080   64 65 32 50 44 88 61 93 65 38 52
 2180   61 64 20 23 58 86 56 92 82 39 57
 2090   60 58 37 23 62 87 47 86 65 41 56
 2190   66 47 28 34 34 87 57 92 70 42 53
 2260   50 50 30 19 24 74 37 88 64 40 42
 DISC   61 52 27 32 50 86 54 91 72 43 53

 2010   81 53 28 36 67 87 55 94 78 52 60
 2040   66 64 29 22 19 84 64 90 67 39 56
 2050   54 61 23 36 52 82 56 89 69 32 51
 DISD   66 59 26 32 46 84 58 91 71 40 55

 2100   44 55 35 23 75 83 46 85 61 30 51
 2270   73 64 41 72 54 85 43 92 84 25 63
 2980   85 78 43 50 76 94 78 96 89 60 73
 4360   90 83 67 49 83 95 56 ** 87 55 72
 DISE   72 69 45 49 71 89 56 92 80 41 64

 DISA   68 61 37 40 65 86 55 90 73 46 58
 DISB   75 54 29 39 51 87 57 90 66 43 57
 DISC   61 52 27 32 50 86 54 91 72 43 53
 DISD   66 59 26 32 46 84 58 91 71 40 55
 DISE   72 69 45 49 71 89 56 92 80 41 64
 STOT   68 57 32 37 55 86 56 91 72 43 57
```

BOSTON PUBLIC SCHOOLS

DEPARTMENT OF EDUCATIONAL TESTING

CURRICULUM REFERENCED FINAL SOCIAL STUDIES - LEVEL 7

1985 - 1986

C.2,14	Basic knowledge of Pre-Columbian civiliz. in West Hemisphere Significance of major events & persons in Latin Am. & Canada hist.	1
C.1-3,14,22	See #1 for C.2,14; Pre-Colum. soc. level tech.; patterns of migration of humans into & thru W. hemis.; major natural resourc.	2
C.5,6	Negative cultural attitudes of European explorers & settlers toward Pre-Columbian people & destruction of their civilizations	3
C.4,11,14	Describe major voyages of discovery & exploration by Europeans; Knowledge of major events in Latin Am. hist. in post-Columbian era; Signify major events & persons in Latin Am. & Canada hist.	4
C.4,11,14		5
C.4,11,14		6
C.4,9,11,14	See Questions # 4-6 for C.4,11,14; Knowledge of major events in Canadian hist., difference between French & non-French speaking	7
C.9	Knowledge of major events in Canadian history	8
C.6-8,11,14	See Ques. #4-6 for C.11,14 & #3 for C.6; Examples of resistance to Europeans by Pre-Colum. people; effect of Europeans on cult.	9
C.8,11,17	See Ques. #9 for C.8,11; Identify major racial, ethnic, & relig. groups of Canada & Latin America, emphasize pluralism	10
C.11,17	Knowledge of major events in Latin Am. hist. in post-Columb. era, major racial, ethnic, & relig. groups of Canada & Latin America	11
C.11,17		12
C.8,11,17 20	See Ques. #10 for C.8,11,17; Describe ways in which diff. groups in W. Hemisphere have influenced ea. other thru war, trade,etc.	13
C.17	Identify major racial, ethnic, & relig. groups of Can. & Lat. Am.	14
C.17,20	See Ques. # 14 for C.17, See Ques. # 13 for C.20	15
C.17,19	See Ques. # 14 for C.17, Prejudice & discrimination against groups in Canada & Latin America	16
C.16	Influences of Latin Am. culture on US based on trade, migration	17
C.9,17	See Ques. # 14 for C.17, Knowledge of major events in Can. hist. Differentiate between French-speaking & non-French speaking Canadians	18
C.9.17		19
C.18,20	Customs, holidays & festivals of Can. & Lat. Am., Ways different groups in W. Hemisp. have influenced ea. other thru war, trade	20
C.11,14	Acquire basic knowledge of major events in Latin Am. history in post-Columbian era; Significance of selection of major events & persons in Latin Am. and Canadian history	21
C.11,14		22
C.11,13,14	See Questions # 21&22 for C.11,14; Sequence of major events and able to make a timeline	23
C.11,14	See Questions # 21 & 22 for C.11,14	24
C.11,14		25
C.9,10	Knowledge of major events in Can. hist., Est. of Commonwealth of Nations & the new Commonwealth nations	26
C.11,13	Knowledge of major events in Lat. Am. hist., Sequence of major events & able to make a timeline	27
C.9	Knowledge of major events in Canadian history	28
C.9,14	See Question #28 for C.9; Significance of major events & persons in Latin Am. and Canadian history	29
C.9	See Question # 28 for C.9	30

C.9,14	Knowledge of major events & persons in Lat. Am & Canada history	31
C.9	Knowledge of major events in Can. hist. diff. between Canadians	32
C.16	Influences of Latin Am. culture on US based on trade, migration	33
C.28	Describe way in which competition drives prices down and scarcity increases prices of items for which is there is demand	34
C.28,29	See question # 34 for C.28, Define inflation, & give examples of countries in W. Hemisphere that have experienced it in recent yrs.	35
C.29	See Question #35 for C.29	36
C.29	See Question #35 for C.29	37
C.12,30	Establishment of Am. colonial possessions, Econs. of W. Hemisphere	38
C.24	Identify diff. stages of economic development in Western Hemisphere	39
C.34	Explore effect of political systems in the Western Hemisphere on	40
C.34	each other (e.g., Cuba's "exporting" of socialism)	41
C.14,18	Significance of major events & persons and identify customs, holidays, & festivals of Latin Am. and Canada	42
C.34	See Question #40 and 41 for C.34	43
C.35	Compare practices of diff. govts. in West. Hemisp. on civil rights	44
C.32	Identify reasons for migration of thousands of people from Latin	45
C.32	America to the US every year	46
C.36	Place major geographic features on a blank map of West. hemisphere, that has political boundaries & locate major rivers & mountains	47
C.36,37	See Question #47 for C.36, Place some major countries & cities on a blank map of West. Hemisphere w/political boundaries	48
C.37	See Question #48 for C.37	49
C.11,14	Knowledge of major events & persons in Lat. Am. and Can. history	50

```
 974 SOC LEVL 7          TECK5005              11/07/86
PERCENTAGE OF CORRECT ANSWERS PER ITEM
NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY **

SCHL    1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40

 2130  50 35 49 46 77 10 41 41 64 51 65 78 66 75 80 47 49 67 30 42 48 38 42 80 49 52 53 37 24 53 71 56 66 62 44 73 35 32 47 42
 2170  37 39 52 50 54 10 31 30 54 50 60 63 62 34 82 36 49 75 34 25 50 41 63 59 32 47 54 47 34 42 50 75 69 71 51 66 20 41 31 26
 4570  41 50 50 29 16  8 16 33 54 45 62 83 66 29 75 37 66 45 20 37 50 37 58 62 20 58 25 33 29 45 58 54 58 62 37 45 25 58 25 37
 2060  74 62  7 40 48 74 88 62 40 44 77 85 92 77 85 44 88 59 11 44 48 77 77 66 29 66 33 44 81 33 29 88 62 55 40 81 44 44 22 44
 2070  45 41 37 39 42  6 24 32 40 27 60 72 67 30 75 26 57 42 17 32 50 35 46 50 21 51 36 26 20 54 40 44 50 53 37 42 17 31 20 31
 2240  35 32 40 52 57 22 58 28 61 22 71 68 75 21 77 30 50 54 10 37 52 21 55 54 31 37 41 34 21 42 52 61 50 57 28 61 25 50 37 35
 DISA  44 40 43 45 54 15 39 35 53 40 64 72 68 42 79 35 54 59 23 34 50 38 54 61 32 49 44 37 29 47 52 61 60 61 41 60 25 39 32 34

 2110  56 56 58 37 68 35 39 27 56 16 68 62 52 75 85 41 62 66 20 37 62 45 56 64 29 60 47 33 33 41 54 68 66 70 47 79 20 35 45 37
 2120  86 86 50 59 71 17 44 50 44 48 53 46 50 57 78 28 65 69  9 21 67 38 63 48 26 63 48 48 32 57 51 73 65 71 26 69 30 50 38 53
 2140  60 53 60 57 73 24 58 44 48 48 70 74 73 62 88 41 67 61 35 38 68 61 55 59 38 61 52 38 45 62 64 75 60 68 46 71 20 39 50 62
 2200  38 34 38 36 69 19 19 34 26 28 55 58 73 41 80 39 44 41 23 33 60 44 46 33 22 38 33 52 22 41 47 53 46 49 39 44 22 26 30 39
 2950  63 60 55 56 82 60 68 62 56 62 74 81 76 68 88 73 78 74 57 54 77 68 57 73 48 68 58 57 57 62 64 74 71 71 54 75 59 52 57 54
 DISB  60 57 53 51 75 36 51 47 48 46 67 69 68 61 85 50 66 64 35 40 69 56 55 59 36 60 50 47 42 55 58 70 63 67 45 69 35 42 47 52

 2330  56 46 57 42 63 31 44 36 57 39 63 69 64 48 74 37 49 57 30 33 57 45 58 49 25 50 44 45 40 54 57 56 63 54 35 63 30 44 36 37
 2080  63 36 50 71 59 24 43 33 63 53 82 68 65 71 86 31 69 62 14 42 39 56 40 49 27 53 42 40 46 52 50 68 69 78 43 63 43 46 36 43
 2180  29 65 49 53 54 26 48 24 58 52 76 70 71 18 83 47 65 63 13 50 63 44 53 51 32 52 32 41 33 47 47 66 66 71 43 55 37 53 46 42
 2090  36 36 50 45 53 20 35 32 57 38 67 60 63 50 66 28 50 46 17 23 40 38 62 41 34 43 38 32 36 34 36 57 55 68 40 56 17 51 33 27
 2190  93 55 50 49 60 40 29 48 69 31 62 83 52 91 77 35 58 57 19 39 78 38 66 37 29 58 56 42 31 53 51 62 58 69 39 84 33 52 57 64
 2260  38 38 58 39 87 49 38 38 49 42 84 65 82 22 84 38 65 69 12 28 44 66 42 79 44 42 49 49 36 57 46 55 63 53 20 65 17 49 57 55
 DISC  52 47 53 48 62 31 41 35 59 42 70 69 65 49 77 37 57 58 20 36 55 46 55 49 30 50 43 42 37 50 49 60 62 64 37 64 30 49 43 43

 2310  53 63 54 36 62 26 40 43 46 43 62 70 79 35 93 42 68 67 34 41 59 64 55 38 32 56 51 40 53 52 46 74 61 64 26 56 18 48 36 41
 2040  40 52 45 25 41  1 44 30 56 31 65 68 56 25 72 41 41 51 10 40 57 53 47 47 31 40 38 30 17 33 41 41 46 54 32 52 25 40 22 31
 2050  34 29 38 52 67  9 56 53 43 31 55 63 67 42 83 48 50 61 10 16 50 46 44 51 33 44 43 42 54 46 47 53 61 63 29 53 21 42 36 46
 DISD  42 48 46 39 58 13 47 43 48 36 60 67 68 35 84 44 54 60 19 32 55 54 49 45 32 47 44 38 43 44 45 57 57 61 29 54 21 43 32 40

 1240  35 31 42 36 45 24 39 25 40 18 56 52 46 54 76 29 70 57 10 26 60 50 44 59 34 45 30 40 36 42 33 60 59 63 31 72 44 30 30 19
 2100  58 69 51 70 62 42 71 56 63 53 80 79 73 43 98 56 74 69 37 51 78 57 60 62 59 47 41 62 50 63 60 63 71 74 53 74 29 59 46 41
 2270  38 42 41 37 81 17 68 40 44 31 52 67 68 27 76 29 57 57 22 14 49 29 52 38 17 40 23 48 41 36 42 57 49 44 27 41 25 37 25 16
 2980  40 39 40 40 62 17 26 38 52 35 68 79 68 40 80 43 75 61 10 23 53 43 56 48 22 28 49 21 13 53 46 58 70 66 39 65 10 43 37 32
 DISE  42 44 43 45 61 25 50 38 49 33 63 67 62 42 82 38 69 61 19 28 60 45 52 52 33 40 35 42 35 48 44 60 62 62 37 64 28 41 34 26

 DISA  44 40 43 45 54 15 39 35 53 40 64 72 68 42 79 35 54 59 23 34 50 38 54 61 32 49 44 37 29 47 52 61 60 61 41 60 25 39 32 34
 DISB  60 57 53 51 75 36 51 47 48 46 67 69 68 61 85 50 66 64 35 40 69 56 55 59 36 60 50 47 42 55 58 70 63 67 45 69 35 42 47 52
 DISC  52 47 53 48 62 31 41 35 59 42 70 69 65 49 77 37 57 58 20 36 55 46 55 49 30 50 43 42 37 50 49 60 62 64 37 64 30 49 43 43
 DISD  42 48 46 39 58 13 47 43 48 36 60 67 68 35 84 44 54 60 19 32 55 54 49 45 32 47 44 38 43 44 45 57 57 61 29 54 21 43 32 40
 DISE  42 44 43 45 61 25 50 38 49 33 63 67 62 42 82 38 69 61 19 28 60 45 52 52 33 40 35 42 35 48 44 60 62 62 37 64 28 41 34 26
 STOT  49 47 48 46 62 25 45 39 52 40 65 69 66 46 81 40 60 60 23 34 57 47 53 53 32 49 43 41 37 49 50 62 61 63 38 62 28 43 38 39
 974 SOC LEVL 7          TECH5005              11/07/86
PERCENTAGE OF CORRECT ANSWERS PER ITEM
NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY **

SCHL    41 42 43 44 45 46 47 48 49 50 TOTAL

 2130   62 37 70 50 52 38 94 70 15 88 53
 2170   58 43 75 40 60 22 96 67 16 81 49
 4570   54 37 62 54 50 29 91 41 50 54 45
 2060   55 51 51 33 48 25 81 59 40 66 56
 2070   40 29 57 29 38 28 76 49 24 58 40
 2240   51 25 61 44 30 32 97 50 20 62 44
 DISA   53 36 65 40 47 29 90 58 22 72 47

 2110   43 37 52 47 45 39 91 68 29 79 51
 2120   59 46 65 42 51 25 78 50 28 65 51
 2140   55 56 67 59 44 42 80 57 36 70 56
 2200   39 30 44 46 36 19 66 36 11 49 40
 2950   66 53 71 63 55 32 85 68 37 68 64
 DISB   55 47 63 55 48 32 81 58 30 66 55

 2030   41 41 59 40 51 31 86 56 28 56 48
 2080   46 40 73 49 59 31 88 65 46 55 52
 2180   51 33 69 53 55 24 88 60 21 52 50
 2090   41 40 56 40 32 21 87 55 16 66 43
 2190   56 41 65 71 48 39 94 60 44 66 55
 2260   65 34 69 58 61 31 98 61 20 71 52
 DISC   48 38 64 50 50 29 89 59 29 59 50

 2010   56 33 71 51 51 30 93 73 16 78 52
 2040   46 28 53 43 41 27 84 51 27 57 41
 2050   53 46 68 37 35 22 81 63 26 79 46
 DISD   52 36 65 44 42 26 86 63 22 73 47

 1240   48 36 65 36 41 19 84 51 19 63 43
 2100   65 43 67 54 59 35 89 78 47 74 60
 2270   36 27 52 22 34 21 76 43 29 51 41
 2980   52 29 73 39 46 26 94 59 20 78 46
 DISE   50 34 64 38 44 25 85 57 28 66 47

 DISA   53 36 65 40 47 29 90 58 22 72 47
 DISB   55 47 63 55 48 32 81 58 30 66 55
 DISC   48 38 64 50 50 29 89 59 29 59 50
 DISD   52 36 65 44 42 26 86 63 22 73 47
 DISE   50 34 64 38 44 25 85 57 28 66 47
 STOT   51 38 64 46 47 28 87 59 26 66 49
```

BOSTON PUBLIC SCHOOLS

DEPARTMENT OF EDUCATIONAL TESTING SOCIAL STUDIES - LEVEL 8

CURRICULUM REFERENCED FINAL

C.1 Acquire basic knowledge of events in US history

C.2 Sequence of major events in US history & able to make a timeline of historical events

C.3 Trace origins of different racial/ethnic groups in the US back in time & geography to their origins in other continents

C.4 Describe way in which Native American and African cultures have been treated by European culture in the US

C.5 Describe some contributions of the cultures of Native Americans, Africans & other groups to the European culture of the US

C.7 Give a brief description of a number of important historical events & figures

C.8 Describe ways in which different groups have recorded & preserved their culture

C.9 Identify the major racial, ethnic, and religious groups of the US, with emphasis on multi-ethnic and multi-racial make-up of our country

C.10 Identify some shared values & beliefs of different cultures in the US

C.11 Identify some customs, holidays, and festivals associated with different groups in the US

C.12 Describe the way in which Native American, African, Hispanic, and other "minority" cultures have been treated by Europeans in the US, citing instances of prejudice, discrimination and oppression

C.13 Identify some instances of prejudice and discrimination against other groups in the US

C.14 Describe the ways in which oppressed groups have not only survived (coping mechanisms) but influenced US culture

C.18 Identify major economic resources of the US

C.19 Describe the role of labor unions in economic history & structure of the US

C.21 Identify technological advances that have affected economic development of the US and highlight the inventors who were responsible

C.27 Describe the main political values behind the US politcal system

C.28 Explore case studies that exemplify value conflicts in US history

C.32 Use different maps to identify climatic features & natural resources of different regions in US or the world

C.1,4,27,32	1
C.1,4,27,32	2
C.1,4,27,32	3
C.1,4,27,32	4
C.1,9,14,28	5
C.1,8,12,28	6
C.1,7	7
C.1,7	8
C.1,2,7	9
C.1,2,7	10
C.1,7,13	11
C.1,7	12
C.1,5,7,14	13
C.1,7,12	14
C.1	15
C.1,18	16
C.1,3,5,7	17
C.1,7,12	18
C.1,3,5,7	19
C.1,7	20
C.1,4,7,12,13	21
C.1,7,19	22
C.1,7	23
C.1,7,18	24
C.1,7,13	25
C.1,7,28	26
C.1,7,11	27
C.1,7,9,10,18	28
C.1,7,9,12,13	29
C.1,7,10	30
C.1,7,8,10,14	31
C.1,7,21	32
C.1,7,18	33
C.1,7	34
C.1,7,21	35
C,1,7,8,9,10,14	36
C.1,7	37
C.1,7	38
C.1,7,8,10,14	39
C.1,7	40
C.1,3,7,9,14	41
C.1,7	42
C.1,3,7,13	43
C.1,3,7,13	44
C.1,7,9,10,12	45
C.1,7,8,10,13	46
C.1,7,18,21	47
C.1,7,18,21	48
C.1,7,21	49
C.1,7,21	50

```
984 SOC LEVL 8          TECR5005            11/07/86
PERCENTAGE OF CORRECT ANSWERS PER ITEM
NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY **

SCHL    1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40

2130   75 58 58 70 78 52 31 90 91 91 90 23 50 15 54 51 48 44 86 73 46 58 51  1 65 45 51 46 25 55 68 53 48 38 83 34 40 41 42 17
2170   96 77 85 85 85 85 53 96 93 94 96 41 84 48 66 82 66 60 85 85 38 37 34 31 78 83 71 67 63 66 83 57 77 64 76 52 70 58 50 58
4570   86 73 65 69 69 60 52 78 69 78 86 39 73  4 65 78 43 47 82 86 52 39 26  4 78 60 39 60 34 60 69 69 78  8 56 56 52 52 52 34
2060   85 53 89 ** 82 85 75 96 92 85 89 46 89 50 67 78 32 85 85 92 53 64 78 64 92 53 67 96 67 53 67 85 96 92 75 35  7 32 82 32
2070   94 89 87 94 91 78 61 97 92 93 95 44 73  7 69 75 15 77 93 76 45 13 59 56 84 80 38 55 61 75 85 74 80 76 84 73 69 53 28 64
2240   86 60 60 73 89 43 16 96 95 89 95 16 41 18 46 73 53 60 67 72 35 56 15  3 60 58 61 41 36 53 75 24 49 46 75 32 12 29 44 21
DISA   89 73 76 83 85 69 47 94 92 91 94 35 68 24 62 72 43 63 85 79 43 38 44 29 76 69 54 57 50 64 78 59 70 59 78 51 51 47 43 44

2110   97 34 78 ** 97 95 82 95 89 97 ** 32 76 13 82 36 28 69 82 89 52 21 36 76 93 89 69 89 93 82 89 71 69 82 93 91 67 82 89 56
2120   92 55 56 90 89 70 41 96 92 95 86 16 61 16 63 50 41 66 81 75 55 38 33  7 76 67 49 58 43 52 90 52 41 52 67 50 55 64 60 40
2140   90 90 31 90 90 96 55 91 92 89 91 50 87 11 85 88 36 77 96 77 68 17 45 56 94 93 52 44 66 80 96 69 87 61 82 30 80 71 84 10
2200   66 37 40 74 77 73 41 90 81 86 87 25 55 24 37 44 34 26 65 72 33 51 38  3 62 65 41 50 34 39 58 55 39 25 48 39 32 30 50 31
2950   90 57 54 65 80 73 42 ** 90 90 95 35 66 19 56 57 35 59 92 78 49 34 31  8 67 69 59 42 49 64 75 41 66 49 74 45 35 52 47 37
DISB   86 58 49 80 85 80 49 95 89 90 91 33 69 17 62 63 35 58 85 77 51 33 37 25 76 75 53 51 54 62 80 55 62 51 72 46 51 57 62 32

2030   89 57 69 69 84 73 46 90 88 85 86 42 67 25 46 52 59 48 84 92 56 33 38 25 71 62 54 50 30 46 74 48 59 52 75 58 57 61 47 56
2080   96 97 87 92 96 87 80 97 96 93 93 82 82 43 74 71 11 74 94 82 79 15 73  5 89 83 21 88 78 79 87 75 87 69 87 73 87 74 70 74
2180   77 63 60 68 86 79 49 93 90 90 94 31 62 13 49 59 30 42 85 65 54 35 26 14 73 70 66 54 45 59 69 35 70 43 65 54 42 52 45 52
2090   94 72 55 88 88 77 47 98 90 89 90 47 72  8 64 56 26 50 89 86 58 33 22 11 75 82 54 64 27 67 80 64 57 37 82 55 55 58 59 59
2190   84 76 77 81 81 82 41 93 89 94 88 37 67 30 71 67 47 61 84 72 67 60 42 31 64 75 71 62 51 66 70 64 52 55 67 72 62 58 61 41
2260   82 66 71 71 89 89 49 92 96 94 92 40 80 29 68 78 43 57 82 87 61 63 50 70 82 80 66 66 64 82 92 78 87 75 43 73 61 54 52 24
DISC   86 67 68 76 86 79 50 93 91 90 90 44 69 23 57 60 39 52 86 80 60 38 38 22 74 73 56 60 44 61 76 55 65 52 71 61 57 59 53 53

2010   82 70 73 95 96 81 43 93 92 91 95 24 75 22 72 60 27 65 94 75 55 43 38  9 87 78 61 67 75 67 86 42 77 57 67 54 70 59 70 50
2040   79 49 50 78 76 54 35 91 82 81 86 24 50  8 40 41 29 38 87 67 39 33 30 20 64 61 44 57 44 62 81 62 57 34 70 44 34 47 47 31
2050   94 74 71 87 96 79 67 95 88 90 90 57 83 34 77 80 32 72 87 86 52 30 65 59 89 80 69 76 61 75 76 59 76 78 77 48 71 63 57 46
DISD   86 66 66 87 90 73 50 93 88 88 90 37 71 23 65 63 30 60 89 77 50 35 47 32 81 74 60 68 61 69 81 54 71 59 72 49 60 57 58 44

1240   88 71 54 75 86 69 33 94 79 81 85 29 55 21 41 57 32 49 81 76 35 15 27 20 70 67 58 52 46 59 82 44 57 58 80 38 34 26 38 33
2100   84 67 58 75 79 72 25 92 85 82 88 25 53 20 55 69 50 53 81 78 44 46 37 25 63 63 50 54 49 59 72 54 56 46 72 54 38 50 49 45
2270   80 49 52 60 88 77 13 86 91 90 81 19 55 14 31 57 21  9 88 75 39 42 14  3 52 40 54 49 13 36 63 29 62 21 68 29 11 32 45 34
2980   80 24 58 82 83 74 51 97 93 93 92 32 55 12 43 56 39 60 93 90 44 46 27  3 62 62 71 56 53 65 85 41 62 49 75 32 45 37 44 23
DISE   84 56 56 74 84 72 31 93 86 86 87 27 54 17 44 60 37 46 85 79 40 36 28 15 63 60 58 53 43 56 76 44 59 46 74 40 34 37 44 34

DISA   89 73 76 83 85 69 47 94 92 91 94 35 68 24 62 72 43 63 85 79 43 38 44 29 76 69 54 57 50 64 78 59 70 59 78 51 51 47 43 44
DISB   86 58 49 80 85 80 49 95 89 90 91 33 69 17 62 63 35 58 85 77 51 33 37 25 76 75 53 51 54 62 80 55 62 51 72 46 51 57 62 32
DISC   86 67 68 76 86 79 50 93 91 90 90 44 69 23 57 60 39 52 86 80 60 38 38 22 74 73 56 60 44 61 76 55 65 52 71 61 57 59 53 53
DISD   86 66 66 87 90 73 50 93 88 88 90 37 71 23 65 63 30 60 89 77 50 35 47 32 81 74 60 68 61 69 81 54 71 59 72 49 60 57 58 44
DISE   84 56 56 74 84 72 31 93 86 86 87 27 54 17 44 60 37 46 85 79 40 36 28 15 63 60 58 53 43 56 76 44 59 46 74 40 34 37 44 34
STOT   86 65 64 80 86 75 46 94 89 89 91 36 67 21 58 64 37 56 86 79 50 36 39 25 74 71 56 58 49 62 78 54 65 53 73 51 52 52 52 43
```

```
 984 SOC LEVL 8            TECR5005              11/07/86
PERCENTAGE OF CORRECT ANSWERS PER ITEM
NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY **

SCHL    41 42 43 44 45 46 47 48 49 50 TOTAL

 2130   29 32 36 52 38 85 19 29 26 58 51
 2170   32 32 52 67 69 91 58 56 53 85 67
 4570   17 26 39 26 26 69 30  4 13 52 52
 2060   21 57 64 71 60 92 67 67 50 85 70
 2070   23 64 46 56 62 96 66 60 33 86 67
 2240   15  9 41 33 49 80 38 29 20 52 49
 DISA   25 40 46 55 56 89 49 46 35 74 61

 2110   86 84 73 89 80 93 76 69 73 89 76
 2120   23 40 35 44 46 89 52 47 29 67 57
 2140   21 12 60 72 86 93 61 58 63 76 68
 2200   34 16 24 29 33 63 12 17 16 34 45
 2950   21 39 44 42 63 86 32 36 35 83 56
 DISB   31 33 45 51 61 84 42 42 41 70 59

 2030   35 38 39 35 59 87 31 37 35 72 57
 2080   44 75 34 66 74 94 64 62 50 57 73
 2180   30 20 38 39 52 84 47 41 35 73 55
 2090   38 44 47 49 53 88 42 52  7 69 59
 2190   43 41 46 52 44 81 57 47 47 73 63
 2260   33 54 57 61 71 98 50 47 43 43 67
 DISC   36 40 42 46 57 87 45 45 35 68 60

 2010   22 39 48 68 45 93 36 26 30 75 62
 2040   31 27 24 28 56 88 31 29 18 50 50
 2050   47 63 44 66 55 86 71 64 57 85 70
 DISD   35 46 40 56 52 89 49 42 37 72 62

 1240   28 33 23 22 51 88 42 26 23 61 52
 2100   28 30 35 40 54 73 35 19 25 71 55
 2270   26  8 34 24 34 77 31 19 55 72 45
 2980   34 25 33 44 55 91 22 25 17 54 54
 DISE   29 26 31 33 50 82 33 23 28 64 52

 DISA   25 40 46 55 56 89 49 46 35 74 61
 DISB   31 33 45 51 61 84 42 42 41 70 59
 DISC   36 40 42 46 57 87 45 45 35 68 60
 DISD   35 46 40 56 52 89 49 42 37 72 62
 DISE   29 26 31 33 50 82 33 23 28 64 52
 STOT   32 38 41 48 56 87 44 41 35 70 59
```

BOSTON PUBLIC SCHOOLS

DEPARTMENT OF EDUCATIONAL TESTING

CURRICULUM REFERENCED FINAL U.S. HISTORY

1985 - 1986

A.9	Describe native Americans in No. America prior to "discovery"	1
A.5	Identify the European countries that engaged in exploration	2
A.12	Identify motivations for Europeans to explore for new lands	3
A.20	Describe rich variety of early multi-cultural & multi-ethnic colonies	4
A.44	Identify existence of slavery in the colonies & what part it played	5
B.4	Identify attempts of England to control colonies through taxation	6
B.1	Define concepts for example: salutatory neglect, boycott, home rule	7
B.13	Describe ideas expressed in the Declaration of Independence	8
B.23	Identify people or groups: Abigail Adams, Thomas Jefferson, Lewis & Clark	9
B.28	Describe the responsibilities of each branch of the new government	10
C.19,27	Define "the West" as changing concept; Identify Texas Revolt & Mex. War	11
C.20	Identify the most important Native American tribes in the United States	12
C.20	during the 1800's	13
D.46	Indicate graphically the change in the U.S. from a rural nation to urban	14
C.24	Describe the US expansion into the Far West: CA, AZ, and New Mexico	15
D.44,61	Define concepts for example: Industrialization, Urbanization, socialism	16
B.13	Describe ideas expressed in the Declaration of Independence	17
C.32,51	Identify what is meant by "Jacksonian Democracy"; Identify persons	18
D.17	Define concepts for example: Frontier, Rural, Urban, Populist, Pioneer	19
C.51	Identify persons & groups: Abraham Lincoln, Ulysses S. Grant, Robert Lee	20
C.50	Define concepts for example: state's rights, secession, war, strategy,	21
C.50	mobilization, Emancipation Proclamation, Copperheads, Border States	22
C.71	Identify the provisions of the 13TH, 14TH, & 15TH Amendments	23
C.67	Define concepts for example: Reconstruction, suffrage, amendments	24
D.6	Identify Plessey vs. Ferguson as establishing "separate but equal"	25
D.12	Identify reasons for founding of Niagra movement, NAACP & Urban League	26
C.71	Identify provisions of the 13TH, 14TH, and 15TH Amendments	27
D.2	Identify people or groups: Booker T. Washington, NAACP, W.E.B. DuBois	28
D.69	Compare organizing, racial & gender compositon of unions	29
D.1	Define concepts for example: Reconstruction, Racism, Civil Rights	30
D.45	Identify people or groups: Andrew Carnegie, John D. Rockefeller, Horatio	31
D.45	Alger, Thomas Alva Edison, Henry Ford, Alexander Graham Bell	32
D.44	Define concepts for example: Industrialization, Urbanization, trade	33
D.45	Identify people or groups: Orville and Wilber Wright, Elijah McCoy	34
D.44	Define concepts for example: Competition, Social Darwinism, unionism,	35
D.44	ward politics, socialism, Robber Baron, corporate Capitalism	36
E.1	Define concepts for example: nationalism, militarism, jingoism	37
E.2	Identify people or groups: Theodore Roosevelt, Karl Marx, Bolsheviks	38
E.14	Describe American attempts to remain neutral during war	39
E.2	Identify people or groups: Woodrow Wilson, Leon Trotsky, Hearst	40
E.2	newspapers, Pancho Villa	41
B.22	Define concepts for example: constitutional govt., balance of power	42
F.1	Define concepts for example: Cold War, United Nations, isolationism	43
F.40	Identify people or groups: Gerald Ford, Jesse Jackson, Kevin White	44
D.61	Identify people or groups: Samuel Gompers, Amer. Federation of Labor	45
D.54	Interpret the Black migration to the North	46
E.37	Identify the strategies used to win passage of the 19TH Amendment	47
F.40	Identify people or groups: Jimmy Carter, current local & nat'l reps.	48
E.46	Identify groups in America that did not share in the 20's prosperity	49
F.40	Identify people or groups: Nguyen Van Thieu, Shirley Chisholm, mayor	50

F.40	Identify people or groups: Caesar Chavez, Andrew Young, city council	51
E.29,65	Identify the Sacco & Vansetti case; recognize contradictions in racism	52
C.51	Identify people or groups: 54th & 55th Mass. Regiment, Irish Regiment	53
F.36	Identify the Civil Rights movement as leading groups to seek rights	54
E.19	Recognize the Treaty of Versailles changed the map of Europe	55
D.88,E.45,50	Define concepts: consumer, annexation For E.45,50 see Ques. #60	56
A.1	Define concepts for example: economic change, global market, culture	57
D.45	Identify people or groups: Henry Ford, Elijah McCoy, Granville T Woods	58
E.1	Define concepts for example: missionary, neutrality, imperialism	59
D.88,E.45,50	Identify new technology effects; describe effects of the Depression	60
E.48	Identify people or groups: Herbert Hoover, Bernard Baruch, The Crisis,	61
E.48	Yellow Peril, movie stars, Paul Robeson, Huey P. Long, Ralph Bunche	62
E.58	Define concepts for example: Fascism, Third Reich, Gestapo, Allies	63
E.61	Narrate w/refs. to maps, events leading up to WWII, identify leaders	64
E.58,59	Identify concepts & people or groups: Holocaust, unnamed soldiers	65
E.61	Narrate w/refs. to maps, events leading up to WWII, identify leaders	66
E.62	Describe selected events of World War II	67
E.62	Describe selected events of World War II	68
E.77	Determine reasons why Allied Powers divided Germany	69
F.1	Define concepts for example: Cold War, middle class, GI Bill, sit-ins	70
F.40	Identify people or groups: school committee, Libertarian Party	71
F.39	Define concepts for example: historical distance, facts/opinions, draft	72
E.72	Determine why the dropping of the A-Bomb in Japan is still debated	73
E.58	Define concepts for example: disarmament, occupation forces, War Bonds	74
E.66	Analyze reasons why Jap-Am were placed in concentration camps	75
E.58	Define concepts for example: Underground Resistance, German-Am Fund,	76
E.58	America First, C-Rations, Fifth Column, Lendlease, the blitz	77
E.77	Determine reasons why the Allied Powers divided Germany	78
E.2	Identify people or groups: Lenin, Leon Trotsky, Pancho Villa	79
E.24	Identify Kennedy policies in international affairs	80

```
 216 US HISTORY          TLCR5005            11/07/86
PERCENTAGE OF CORRECT ANSWERS PER ITEM
NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY **

SCHL     1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40

 1040   35 35 32 56 37 62 48 66 79 53 48 61 45 65 49 43 81 33 51 76 50 48 17 67 46 35 52 53 65 42 59 58 63 70 31 50 42 53 38 44
 1110   39 32 35 75 30 74 47 87 78 67 71 61 48 68 45 70 88 31 57 80 50 46 11 50 31 38 48 61 51 37 61 70 64 58 34 57 46 36 29 56
 DISA   37 34 34 65 33 68 47 76 79 60 60 61 46 66 47 57 84 32 54 78 50 48 14 58 39 37 50 57 58 39 60 64 64 64 32 53 44 44 33 50

 1253   36 18 40 68 35 68 53 83 72 57 71 64 41 56 49 64 69 40 63 80 57 52  8 55 16 28 45 48 46 37 62 58 66 77 30 54 52 26 29 46
 1100   29 21 28 62 32 61 50 69 72 53 68 53 28 60 41 42 69 34 42 70 54 40  8 65 16 26 41 42 43 39 57 49 66 60 26 49 44 54 23 50
 DISB   34 19 36 66 34 65 52 78 72 56 70 60 37 57 46 56 69 38 56 76 56 48  8 59 16 27 44 46 45 38 60 55 66 71 29 52 49 37 27 48

 1120   30 35 37 67 20 67 35 75 77 54 64 67 24 62 60 58 71 32 54 73 56 50 23 56  9 28 47 56 58 33 62 39 64 54 26 64 37 16 26 32
 1160   40 36 35 74 37 72 58 76 68 51 46 50 30 64 32 33 74 34 53 71 62 63  8 17 37 16 46 70 66 51 76 64 71 71 50 63 66 38 57 40
 DISC   30 36 36 72 32 71 50 76 71 52 52 56 28 63 41 42 73 33 54 72 60 59 12 30 28 20 46 66 63 45 71 55 69 66 42 63 56 31 47 37

 1350   14  0  0 28 14 71  0 28 14 28 14 14 28 28  0 14 14 28 71 14 28  0 28 28  0 42 57  0 14 71  0 28 14 14 28 28 28 42 42 57
 1070   34 36 47 80 18 71 52 86 84 70 66 68 32 71 50 59 80 39 58 79 54 47 16 57 38 47 43 64 55 55 61 56 67 76 40 50 51 53 32 46
 DISD   33 35 46 79 18 71 51 84 82 69 64 66 32 70 49 58 78 39 58 77 54 45 16 56 37 47 44 62 54 55 59 55 65 74 39 50 50 53 32 46

 1380   54 49 28 59 49 67 44 78 85 61 48 66 29 54 59 63 80 29 49 71 50 43  8 52 26 28 50 54 38 43 57 44 53 58 42 42 42 23 37 36
 1190   54 45 54 74 27 81 72 85 92 76 85 83 49 70 56 72 90 32 67 70 74 61 21 81 34 36 52 72 65 50 72 74 76 76 52 41 63 49 47 58
 1240   37 33 43 81 38 79 56 78 76 61 65 70 23 79 23 39 79 48 65 78 73 69 14 74 50 31 59 65 56 64 71 56 61 67 27 58 77 43 10 42
 DISE   49 43 37 68 42 73 52 80 84 64 60 70 31 65 47 47 82 36 57 73 61 54 12 64 35 30 53 61 48 51 64 53 59 64 39 47 56 34 30 41

 DISA   37 34 34 65 33 68 47 76 79 60 60 61 46 66 47 57 84 32 54 78 50 48 14 58 39 37 50 57 58 39 60 64 64 64 32 53 44 44 33 50
 DISB   34 19 36 66 34 65 52 78 72 56 70 60 37 57 46 56 69 38 56 76 56 48  8 59 16 27 44 46 45 38 60 55 66 71 29 52 49 37 27 48
 DISC   30 36 36 72 32 71 50 76 71 52 52 56 28 63 41 42 73 33 54 72 60 59 12 30 28 20 46 66 63 45 71 55 69 66 42 63 56 31 47 37
 DISD   33 35 49 79 18 71 51 84 82 69 64 66 32 70 49 58 78 39 58 77 54 45 16 56 37 47 44 62 54 55 59 55 65 74 39 50 50 53 32 46
 DISE   49 43 37 68 42 73 52 80 84 64 60 70 31 65 47 47 82 36 57 73 61 54 12 64 35 30 53 61 48 51 64 53 59 64 39 47 56 34 30 41
 STOT   38 33 38 69 33 69 51 79 78 60 62 63 35 64 46 52 77 36 56 75 56 50 12 56 31 32 43 57 52 45 62 56 64 67 35 52 51 40 32 45
 216 US HISTORY          TECHS005             11/07/86
PERCENTAGE OF CORRECT ANSWERS PER ITEM
NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY **

SCHL    41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 TOTAL

 1340   47 36 43 73 64 24  7 64 43 38 47 28 34 62 14 29 22 31 65 20 56 36 50 77 37 75 21 35 61 49 68 33 75 26 53 70 71 40 15 51 48
 1110   33 25 64 66 39 22  9 82 37 35 57 28 36 48 25 18 23 42 57 25 46 38 51 74 22 70 22 40 59 58 75 34 64 28 48 73 69 41 25 35 48
 DISA   40 31 53 69 52 23  8 83 40 37 52 28 35 55 19 23 23 36 61 23 51 37 50 75 29 73 22 38 60 53 72 33 69 27 50 71 70 41 20 43 48

 1250   38 42 51 69 43 26 12 84 23 36 45 23 34 50 22 26 19 38 60 32 66 49 56 80 42 76 23 51 60 60 83 34 73 23 61 75 78 41 27 51 49
 1100   33 26 52 66 47 27 16 74 33 46 46 25 26 37 18 34 30 30 57 33 59 34 53 79 37 73 25 47 60 51 80 32 70 16 46 65 67 41 12 44 45
 DISB   36 36 51 68 44 27 14 80 27 40 45 24 31 45 21 29 23 35 59 32 63 43 55 79 40 75 24 50 60 57 81 33 72 20 56 71 74 41 22 48 47

 1120   32 28 55 67 32 24 16 69 45 49 52 32 45 47 11 28 26 26 60 32 50 30 52 75 32 52 33 33 49 50 69 39 35 24 43 60 56 43 20 45 45
 1160   77 62 59 65 54 38  7 79 25 40 51 32 23 39 46 32 51 48 67 32 57 50 69 77 39 83 38 59 71 71 83 57 83 36 66 77 76 42 47 50 53
 DISC   62 50 58 66 47 33 10 76 32 43 52 32 30 42 34 30 43 40 65 32 55 43 64 76 37 72 37 50 64 64 79 51 67 32 59 71 69 42 38 48 50

 1350   14 42  0 57 14  0 57 14  0 42  0 28 14 57  0  0 14 28  0 28 57 57 28 57  0 14 14  0 28 28  0 28 57 14  0 14 28  0  0 42 23
 1070   53 36 58 73 63 26 13 78 37 47 50 37 48 55 32 17 23 61 77 43 74 36 57 79 41 76 24 35 62 54 78 47 80 37 60 71 72 47 29 51 53
 DISD   52 37 56 73 62 25 14 76 36 46 48 37 47 55 31 17 23 60 75 43 74 37 56 79 40 74 24 34 61 54 76 46 79 36 58 70 70 45 28 51 52

 1383   47 44 73 67 46 26  4 70 41 33 50 32 30 50 14 18 38 25 43 21 45 39 38 54 36 51 19 47 59 41 67 35 70 21 36 57 70 46 12 54 45
 1190   52 47 61 67 61 32 10 92 78 47 70 34 43 69 36 65 80 70 69 40 56 43 61 90 49 85 49 49 56 65 87 40 96 34 67 90 85 69 32 60 61
 1240   39 29 58 78 63 27 10 89 57 55 49 15 27 57 31 63 63 46 75 49 73 58 56 87 27 70 24 52 70 71 94 27 81 51 71 84 81 45  8 55 55
 DISE   46 40 67 71 54 27  9 80 52 42 53 27 32 55 23 40 52 39 57 32 56 46 47 71 36 63 25 49 62 54 79 33 78 32 52 71 76 49 14 55 51

 DISA   40 31 53 69 52 23  8 83 40 37 52 28 35 55 19 23 23 36 61 23 51 37 50 75 29 73 22 38 60 53 72 33 69 27 50 71 70 41 20 43 48
 DISB   36 36 51 68 44 27 14 80 27 40 45 24 31 45 21 29 23 35 59 32 63 43 55 79 40 75 24 50 60 57 81 33 72 20 56 71 74 41 22 48 47
 DISC   62 50 58 66 47 33 10 76 32 43 52 32 30 42 34 30 43 40 65 32 55 43 64 76 37 72 37 50 64 64 79 51 67 32 59 71 69 42 38 48 50
 DISD   52 37 56 73 62 25 14 76 36 46 48 37 47 55 31 17 23 60 75 43 74 37 56 79 40 74 24 34 61 54 76 46 79 36 58 70 70 45 28 51 52
 DISE   46 40 67 71 54 27  9 80 52 42 53 27 32 55 23 40 52 39 57 32 56 46 47 71 36 63 25 49 62 54 79 33 78 32 52 71 76 49 14 55 51
 STOT   45 38 57 69 51 27 11 79 38 41 50 29 35 51 24 29 33 41 63 32 60 42 53 76 36 71 25 44 61 56 78 38 74 29 54 71 72 44 22 49 49
```

BOSTON PUBLIC SCHOOLS

DEPARTMENT OF EDUCATIONAL TESTING CIVICS

CURRICULUM REFERENCED FINAL

1985 - 1986

A.5	Why people create governments to prevent anarchy	1
A.24	Explain why a Constitutional Convention was in Phil. in 1787	2
A.33	Define concepts for example; popular sovereignty, federalism	3
A.36	Explain the constitutional principle of separation of powers	4
A.14	Describe procedures for becoming a natuaralized citizen of US	5
B.5	Powers of Congress in relation to revenue, taxes, commerce	6
B.1	Define concepts for example; bicameral, Senate, impeach	7
B.17	Constitutional powers and duties of the President and V.P.	8
C.2b	How federal and state govts are related within a fed system	9
B.29	Explain the meaning and uses of judicial review	10
B.34a	How money is raised to pay the cost of the federal govt.	11
C.2	How federal and state govts are related with a fed system	12
C.13	Explain the various roles of the state governors	13
C.30	Organization and operation of county govt in Mass.	14
C.36	Describe metropolitan government agencies	15
C.34	The power and duties of Boston city officials	16
C.33	Organization & operation of govt according to Bos. City Char.	17
D.1	Define concepts for example; interest groups, coalition	18
D.20	Describe rules for voter eligibility	19
F.11	How basic economic decisions are made in a command economy	20
D.33	Identify various techniques of propaganda used in campaigns	21
D.35	Skill of writing letters to influence opinions & decisions	22
E.15	Criminal justice procedures, from arrest to sentence or acq.	23
E.12	Identify and describe major types of crimes	24
E.26	Code of Discipline; rights & responsibilities	25
E.28	Various procedures established by the Code of Discipline	26
F.9	Define concepts for example; capitalism, communism	27
F.17	Advantages & disadvantages of the 3 types of business organ.	28
F.11	How basic economic decisions are made in a command economy	29
F.1	Define concepts for example; depression, inflation, GNP	30
F.8 F.9	Identify major problems that may afflict an economic system	31 32
I.22	Majority rule w/minority rights is a character of dem. soc.	33
I.15	Identify organizations, individuals & events ex., NAACP	34
I.16	Brown vs Board of Educ. & Heart of Atlanta Motel vs U.S.	35
I.17	Passage of federal laws during the 1960's and 1970's	36
I.10,I.16	Dred Scott and Plessy cases I.16 refer to above obj.	37
J.4	The role of the Secretary of State in forming foreign policy	38
J.2	President's roles of chief diplomat and commander in chief	39
J.19	Organization and operation of the United Nations	40
J.11	Major changes in development of American foriegn policy;1945	41
B.7	Special powers of the House of Reps and the Senate	42
C.41	Identify main sources of revenue of state & local govts	43
A.18	Items in terms of the period before the Constitutional Conv.	44
F.1	Define concepts for example; depression, inflation, GNP	45
B.15	Describe how the President is nominated and elected	46
A.42	How judicial review became principle of American govt; 1803	47
A.18	American Revolution, Continental Congress,Declaration of Ind.	48
C.13	Explain the various roles of the state governors	49
F.1	Define concepts for example; depression, inflation, GNP	50

B.11	Define concepts for example: chief executive, electoral college	51
B.26	Identify & describe the main roles of federal judicial officials	52
B.11	Define concepts for example: cabinet, nominate, electoral vote, treaty	53
A.32	Explain connection between proposal & ratification of Bill of Rights and ratification of the Constitution	54
B.1	Define concepts for example: bicameral, Senate, House of Reps.	55
B.26	Identify & describe the main roles of federal judicial officials	56
B.26		57
B.14	List qualifications & terms of office of the President & Vice Pres.	58
E.11	Define concepts for example: trial, grand jury, plea bargaining	59
A.12	Define concepts for example: citizen, alien, immigrant, naturalization	60
A.40	Describe importance of "elastic clause" in preserving the Constitution as a living document	61
C.6	Identify powers and duties of major state agencies	62
C.6		63
B.34	Summarize how the federal govt. gets money to finance activities	64
B.1	Define concepts for example: Congressional district, political party, majority & minority party, bill, impeach, lobbyist, quorom, veto	65
B.1		66
B.3	Describe how the Congress is organized	67
B.3		68
B.3		69
B.3		70
A.16,17	Connect rights & responsibilities & describe the responsibilities or duties of citizenship in a democracy, necessary to preserve rights	71
E.7	Define concepts for example: civil rights, due process, implied rights	72
A.16.17	Connect rights & responsibilities & describe the responsibilities or duties of citizenship in a democracy, neccesary to preserve rights	73
A.33	Define concepts for example: federalism, popular sovereignty	74
D.28,32	Define concepts for example: public opinion poll, pollster, propaganda Explain how the mass media of communication might influence the public	75
F.9	Define concepts for example: capitalism, communism, socialism, market economy, free enterprise, command economy, competition	76
F.9		77
F.1	Define concepts for example: business cycle, depression, inflation, recession, recovery, Gross National Product (GNP), consumer goods	78
F.1		79
F.15	Define concepts for example: corporation, partnership, monopoly	80

```
 206 CIVICS              TECR5005              11/07/86
PERCENTAGE OF CORRECT ANSWERS PER ITEM
NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY **

SCHL    1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40

 1040  35 78 46 47 94 30 47 35 73 50 64 47 67 51 47 21 87 49 63 73 50 50 59 27 63 51 60 68 63 61 58 36 38 90 60 61 30 40 48 34
 1110  54 29 43 52 73 29 52 27 79 57 63 52 60 55 33 15 66 51 37 74 38 42 72 33 56 45 21 64 43 36 61 36 19 74 73 38 35 31 54 36
 DISA  46 50 44 50 82 29 50 31 77 54 63 50 63 54 39 17 75 50 48 74 43 45 67 30 59 48 38 66 52 47 60 36 27 81 68 48 33 35 51 35

 1250  52 38 47 50 74 34 45 28 58 53 50 31 58 63 45  9 81 44 43 85 61 52 77 34 75 70 28 77 54 44 71 44 28 84 65 46 41 35 54 47
 1100  51 31 59 59 91 17 39 24 61 41 49 32 60 62 45 15 77 48 43 85 51 51 74 25 66 51 32 70 44 28 64 35 35 76 53 48 22 30 44 44
 DISB  52 36 51 53 80 28 43 27 59 49 50 31 59 62 45 11 80 45 43 85 57 52 76 31 72 63 29 75 51 38 69 41 30 81 61 47 34 33 51 46

 1120  57 39 57 42 73 27 58 35 72 47 60 40 56 60 41 17 75 46 50 68 42 43 79 34 68 57 27 67 61 36 54 37 15 78 47 36 34 34 57 46
 1160  56 36 56 59 77 27 50 27 68 22 40 40 54 72 40  0 81 40 36 77 59 68 90 36 63 59 22 68 68 36 63 40 31 86 45 40 31 36 40 40
 DISC  56 38 56 45 74 27 55 33 71 43 56 40 56 62 41 13 76 45 47 69 45 48 81 34 67 57 26 67 62 36 56 37 18 80 47 37 33 34 54 45

 1050  55 47 65 58 82 34 61 44 82 56 56 54 71 75 48 21 81 68 59 70 61 64 77 31 75 69 32 70 58 62 63 46 25 91 45 63 48 42 68 48
 1070  56 34 66 62 86 27 49 31 67 51 57 42 63 62 32 13 81 52 46 81 50 45 77 29 75 47 26 80 59 43 65 50 23 80 47 39 39 29 57 42
 DISD  56 38 66 61 85 29 53 35 71 52 57 46 65 66 37 15 81 57 50 78 54 51 77 30 75 54 28 77 59 49 64 49 23 84 47 47 42 33 60 43

 1030  ** ** ** ** ** **  0  0 **  0 **  0 **  0  0  0 **  0  0 **  0  0  0 ** ** **  0 **  0  0 ** **  0  0 ** ** **  0  0 **
 1080  30 22 31 54 66 22 38 11 73 24 39 37 54 28 40 22 49 33 49 69 40 30 41 26 44 40 42 31 38 21 34 22 24 74 48 26 16 22 27 23
 1200  59 57 79 86 77 32 35 27 86 66 71 62 69 64 64  3 86 57 62 84 76 54 77 20 67 61 57 64 45 45 71 32 22 91 64 38 42 47 64 38
 1210  70 56 85 80 87 35 54 63 85 80 70 57 68 70 77 31 84 57 70 75 68 57 71 38 71 68 42 56 66 42 78 42 29 89 66 64 43 52 57 43
 1240  63 17 40 50 67 20 45 25 62 35 47 24 60 65 46 11 71 50 50 75 41 52 73 25 62 54 20 76 68 36 50 48 30 87 35 40 27 32 46 43
 DISE  52 32 51 62 72 25 42 26 74 43 52 40 61 53 52 16 68 46 54 75 51 46 63 27 58 53 37 56 54 33 53 36 27 83 49 39 29 34 44 36

 DISA  46 50 44 50 82 29 50 31 77 54 63 50 63 54 39 17 75 50 48 74 43 45 67 30 59 48 38 66 52 47 60 36 27 81 68 48 33 35 51 35
 DISB  52 36 51 53 80 28 43 27 59 49 50 31 59 62 45 11 80 45 43 85 57 52 76 31 72 63 29 75 51 38 69 41 30 81 61 47 34 33 51 46
 DISC  56 38 56 45 74 27 55 33 71 43 56 40 56 62 41 13 76 45 47 69 45 48 81 34 67 57 26 67 62 36 56 37 18 80 47 37 33 34 54 45
 DISD  56 38 66 61 85 29 53 35 71 52 57 46 65 66 37 15 81 57 50 78 54 51 77 30 75 54 28 77 59 49 64 49 23 84 47 47 42 33 60 43
 DISE  52 32 51 62 72 25 42 26 74 43 52 40 61 53 52 16 68 46 54 75 51 46 63 27 58 53 37 56 54 33 53 36 27 83 49 39 29 34 44 36
 STDT  52 38 54 56 79 28 48 30 70 49 55 41 62 59 43 15 76 50 49 77 51 49 72 30 67 55 32 68 55 41 61 41 26 82 54 44 35 34 52 41
 206 CIVICS             TECR5005            11/07/86
PERCENTAGE OF CORRECT ANSWERS PER ITEM
NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY **

SCHL    41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 TOTAL

 1340   32 13 28 29 72 28 27 50 36 50 88 38 35 33 18 38 39 30 31 67 42 50 44 46 27 56 34 30 48 43 78 54 46 19 27 48 71 68 41 35 48
 1110   27 18 30 37 44 36 28 37 45 42 78 36 33 45 11 40 57 27 35 54 45 48 41 51 36 47 20 35 33 51 65 33 32 21 44 53 64 48 43 50 44
 DISA   29 16 29 34 56 32 28 43 41 45 82 37 34 40 14 39 49 28 33 60 44 49 42 48 32 51 26 33 40 47 71 42 38 20 37 51 67 57 42 43 46

 1250   30 20 26 33 53 41 46 49 52 63 61 25 37 69 22 36 66 41 39 63 39 47 46 37 36 55 21 29 28 44 68 46 54 29 59 51 80 63 56 58 49
 1100   38 24 24 27 39 50 30 41 55 54 55 39 19 46 20 21 43 21 25 65 38 44 31 32 27 37 22 24 30 45 65 37 31 29 46 50 69 40 37 39 43
 DISB   33 21 25 31 48 44 42 46 53 60 59 30 31 61 21 31 58 34 34 64 38 46 42 35 33 49 21 28 28 44 67 43 46 29 55 51 76 55 50 51 47

 1120   29 25 29 32 44 45 32 45 46 41 65 22 30 52 22 30 47 41 34 38 46 48 37 43 34 48 28 32 30 38 60 31 48 25 58 51 74 52 47 39 45
 1160   31 18 22 22 36 45 22 45 59 54 90 27 18 63 31 31 68 18 45 54 59 50 40 18 36 50 18 22 22 45 59 18 54 36 68 59 77 36 36 54 45
 DISC   30 24 28 31 43 45 31 45 49 43 70 23 28 54 24 31 51 37 36 41 49 49 37 38 34 49 25 31 29 39 60 29 50 27 60 52 75 49 45 42 45

 1050   46 28 26 30 50 49 25 49 60 65 79 51 45 44 30 48 65 40 56 59 49 50 40 45 39 49 29 40 43 35 78 46 49 40 48 57 76 70 61 50 53
 1070   38 20 26 32 53 39 36 52 44 61 73 37 34 59 23 33 56 46 38 63 49 51 47 47 40 50 38 29 46 44 75 40 38 23 52 56 76 62 48 56 49
 DISD   41 22 26 31 52 42 33 51 49 62 75 35 37 54 25 37 59 44 42 62 49 51 45 46 40 49 33 33 45 41 76 42 40 28 51 56 76 65 52 54 50

 1030   **  0  0 **  0  0  0 **  0  0 **  0  0 **  0  0  0  0  0 **  0 **  0 **  0 **  0 ** ** ** ** ** **  0  0  0  0  0 **  0 **  0 46
 1080   25 16 11 20 41 38 15 28 27 29 49 20 27 12 18 22 33 10 22 45 19 47 36 50 24 47 23 33 19 24 49 45  9 10 49 22 35 24 22 22 32
 1200   38 28 59 55 66 30 28 44 54 50 79 55 37 55 27 44 66 25 44 59 57 59 57 40 50 59 30 49 40 69 67 61 44 57 67 40 71 72 55 37 54
 1210   59 38 36 59 63 31 36 72 61 49 70 36 36 63 17 35 47 52 42 47 38 57 47 26 40 61 28 31 45 52 77 64 42 57 59 52 64 70 43 45 55
 1240   35 15  5 30 41 43 34 46 43 48 73 34 27 45 15 26 39 28 27 50 38 45 33 49 34 52 17 38 25 33 75 40 34 46 44 59 80 65 40 45 43
 DISE   36 21 21 36 49 37 27 36 42 42 65 33 30 40 18 29 43 25 30 49 35 50 40 44 34 53 23 37 29 39 65 49 28 38 52 42 61 53 38 36 43

 DISA   29 16 29 34 56 32 28 43 41 45 82 37 34 40 14 39 49 28 33 60 44 49 42 48 32 51 26 33 40 47 71 42 38 20 37 51 67 57 42 43 46
 DISB   33 21 25 31 48 44 42 46 53 60 59 30 31 61 21 31 58 34 34 64 38 46 42 35 33 49 21 28 28 44 67 43 46 29 55 51 76 55 50 51 47
 DISC   30 24 28 31 43 45 31 45 49 43 70 23 28 54 24 31 51 37 36 41 49 49 37 38 34 49 25 31 29 39 60 29 50 27 60 52 75 49 45 42 45
 DISD   41 22 26 31 52 42 33 51 49 62 75 35 37 54 25 37 59 44 42 62 49 51 45 46 40 49 33 33 45 41 76 42 40 28 51 56 76 65 52 54 50
 DISE   36 21 21 36 49 37 27 36 42 42 65 33 30 40 18 29 43 25 30 49 35 50 40 44 34 53 23 37 29 39 65 49 28 38 52 42 61 53 38 36 43
 STDT   35 21 29 32 50 40 32 44 47 52 70 33 33 50 21 33 52 34 35 57 42 49 42 43 35 50 26 32 35 42 69 43 39 29 50 50 71 57 46 46 46
```

FOREIGN LANGUAGES

BOSTON PUBLIC SCHOOLS
DEPARTMENT OF EDUCATIONAL TESTING
CURRICULUM REFERENCED FINAL

SPANISH I

1985 - 1986

GRAMMAR	1	I.1	Use correct form of the adj. to agree in no. & gender w/noun
	2	E.18	Use gustar & other similar verbs (encantar) correctly
	3	H.3	Use contractions al and del correctly
	4	I.1	Use correct form of the adj. to agree in no. & gender w/noun
	5	E.1	Use conjugated forms of regular verbs correctly in pres. tense
	6	E.16	Using saber and conocer in correct form
	7	K.2	Using double negatives with negative words such as nadie
	8	H.3	Use contractions al and del correctly
	9	M.8	Using idiomatic expressions
	10	G.3	Use correct forms of pronouns after a preposition
	11	M.7	Use idiomatic expressions with tener and hacer
	12	I.8	Use correct forms of demonstrative adjectives
	13	E.17	Use pedir and preguntar in correct form
	14	E.14	Use infinitive form of the verb correctly after prepositions
	15	G.5	Place object pronouns in correct position before conjug. verb
	16	E.13	Use ir a to describe actions that will occur in the future
	17	E.16	Use saber and conocer in correct form
	18	M.5	Use basic time expressions (time, days, months, date, seasons)
	19	M.5	
	20	H.1	Use correct definite article to agree in no. & gender w/noun
	21	E.15	Using ser and estar in correct form
	22	I.3	Use shortened forms of the masculine singular adjectives
	23	M.7	Use idiomatic expressions with tener and hacer
	24	M.5	Use basic time expressions
	25	E.15	Using ser and estar in correct form
	26	L.2	Using interrogative words correctly
	27	E.15	Using ser and estar in correct form
	28	I.1	Use correct form of the adj. to agree in no. & gender w/noun
	29	H.3	Use the contractions al and del correctly
	30	M.6	Using vocabulary i.e., family, everyday objects, animals, etc.
	31	M.6	
	32	M.6	
	33	E.1	Use conjugated form of reg. verbs correctly in present tense
	34	M.6	Using vocabulary
	35	G.3	Use the correct form of pronouns after a preposition
	36	G.5	Place object pronouns in correct position before conjug. verbs
	37	M.7	Use idiomatic expressions with tener and hacer
	38	I.1	Use correct form of the adj. to agree in no. & gender w/noun
	39	I.9	Using correct forms of possessive adjectives
	40	E.6	Use conjugated forms of common irreg. verbs in preterite tense
READING	41	C.2	Reading with sufficient comprehension to interpret set expressions in areas of immediate need
	42	C.2	
	43	C.1	Reading with sufficient understanding to interpret highly contextualized words or cognates within predictable areas
	44	C.1	
	45	C.1	
FUNCTIONAL OBJECTIVES	a	R.9	Expressing want, desire or intention
	b	T.3	Instructing or directing others to do something
	c	R.8	Expressing gratitude
	d	S.2	Expressing regret
	e	R.1	Expressing likes, dislikes, or preferences
CULTURE	1-10	V & W	Cultural Knowledge Cultural Attitudes

```
 377 SPANISH I             TECR5005              11/07/86
PERCENTAGE OF CORRECT ANSWERS PER ITEM
NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY **

SCHL     1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40

 1040   51 62 17 44 13 51 31 31 48 51 31 27 20 55 37 44 31 51 65 31 55 41 20 51 46 56 55 44 62 62 34 68 31 44 51 51 27 37 55 13
 1110   70 73 52 64 68 61 68 73 53 73 59 50 70 58 59 67 55 59 79 64 68 68 59 67 71 70 55 68 67 76 62 70 61 71 68 65 58 68 64 74
 DISA   64 69 41 58 52 58 57 60 52 66 51 43 55 57 53 60 47 57 75 54 64 60 47 62 64 66 55 61 65 71 54 69 52 63 63 61 48 59 61 56

 1250   81 46 46 47 36 54 57 51 35 80 59 20 28 27 30 55 34 17 69 48 37 57 36 50 35 47 39 37 48 46 31 51 42 55 42 42 28 27 61 23
 1100   62 62 17 58 17 20 55 27 31 55 58 34 24  3 10 34 10 68 68 27 27 41 10 34 55 51 17 27 31 20 20 34 31 41 34 37 20 27 51 10
 DISB   76 50 39 50 31 46 57 45 34 74 58 23 27 21 25 50 28 29 69 43 35 53 29 46 40 48 34 35 44 40 29 47 39 52 40 41 26 27 58 20

 1060   58 47 11 35 23 47 52 35 35 58 41 41 11 35 41 35  5 23 73 11 23 64 23 35 76 41 64 64 29 23 35 35 29 23 35 35 29  5 52 17
 1120   87 67 48 77 54 54 70 74 64 70 58 45 51 48 61 51 64 58 77 70 67 64 45 67 80 70 61 67 58 74 51 54 54 70 54 77 51 54 67 61
 1160   96 75 37 62 31 34 34 55 79 55 62 17 34 48 37 56 34 65 68 27 55 65 31 41 48 68 58 48 58 65 27 48 48 62 51 55 55 20 51 34
 DISC   84 66 36 62 38 45 53 58 63 62 55 33 36 45 48 50 40 53 72 41 53 64 35 50 67 63 61 59 51 59 38 48 46 57 49 59 48 31 58 41

 1050   76 72 34 48 32 51 37 48 39 67 41 34 44 25 37 23 16 37 69 53 44 50 20 37 62 32 30 67 69 34 27 25 86 58 51 44 25 23 46 20
 1070   70 76 41 70 64 64 41 47 70 76 47 23 41 41 52 47 70 47 82 64 52 70 58 64 64 82 70 58 52 76 76 17 70 58 64 41 23 58 62 58
 DISD   75 73 36 55 41 55 38 48 48 70 43 31 43 30 41 30 31 40 73 56 46 63 31 45 63 46 41 65 65 46 41 23 81 58 55 43 25 33 56 31

 1080   58 57 24 71 25 43 32 36 53 64 50 28 30 46 48 45 15 47 59 46 51 62 29 43 50 63 51 51 64 58 28 53 43 54 52 58 42 36 62 41
 1190   ** ** 80 ** ** ** 80 ** ** ** ** 80 80 80 60 ** 80 ** ** ** 80 ** 80 ** ** ** ** ** ** ** ** ** 60 ** 40 60 80 ** ** **
 1210   82 68 50 69 36 56 43 69 57 59 56 45 56 56 45 60 41 45 71 42 67 71 57 65 73 61 56 48 75 64 54 65 67 67 63 58 44 31 59 69
 1240   88 72 48 74 52 56 38 50 48 70 46 36 34 54 40 44 28 36 72 52 52 52 24 26 42 64 48 46 58 34 40 38 82 52 46 36 32 40 72 32
 DISE   75 65 41 71 37 52 39 54 54 64 52 38 42 52 45 52 30 45 67 47 58 64 40 50 58 63 53 50 68 56 42 56 61 60 55 53 41 36 64 51

 DISA   64 69 41 58 52 58 57 60 52 66 51 43 55 57 53 60 47 57 75 54 64 50 47 62 64 66 55 61 65 71 54 69 52 63 63 61 48 59 61 56
 DISB   76 50 39 50 31 46 57 45 34 74 58 23 27 21 25 50 28 29 69 43 35 53 29 46 40 48 34 35 44 40 29 47 39 52 40 41 26 27 58 20
 DISC   84 66 36 62 38 45 53 58 63 62 55 33 36 45 48 50 40 53 72 41 53 64 35 50 67 63 61 59 51 59 38 48 46 57 49 59 48 31 58 41
 DISD   75 73 36 55 41 55 38 48 48 70 43 31 43 30 41 30 31 40 73 56 46 63 31 45 63 46 41 65 65 46 41 23 81 58 55 43 25 33 56 31
 DISE   75 65 41 71 37 52 39 54 54 64 52 38 42 52 45 52 30 45 67 47 58 64 40 50 58 63 53 50 68 56 42 56 61 60 55 53 41 36 64 51
 STOT   75 64 39 62 39 51 47 53 50 67 53 34 40 43 42 50 34 44 70 47 52 61 38 50 57 59 49 51 60 55 41 52 55 58 52 52 39 37 61 42
 377 SPANISH I           TECH5005           11/07/86
PERCENTAGE OF CORRECT ANSWERS PER ITEM
NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY **

SCHL    41 42 43 44 45 TOTAL

 1040   37 20 48 31 82 43
 1110   67 50 49 40 82 64
 DISA   58 41 48 37 82 58

 1250   67 59 60 63 75 46
 1100    6  6 13 13 20 31
 DISB   52 46 48 51 61 42

 1060   35 29 29 23 70 36
 1120   54 64 61 64 80 63
 1160   44 17 51 34 82 49
 DISC   46 38 50 44 79 52

 1050   41 32 32 37 69 43
 1070   52 76 23 76 88 59
 DISD   45 45 30 48 75 48

 1080   39 31 34 41 79 46
 1190   ** 80 ** ** 80 91
 1210   57 38 55 51 75 58
 1240   62 68 42 42 76 49
 DISE   52 43 45 46 77 53

 DISA   58 41 48 37 82 58
 DISB   52 46 48 51 61 42
 DISC   46 38 50 44 79 52
 DISD   45 45 30 48 75 48
 DISE   52 43 45 46 77 53
 STOT   51 43 45 45 74 51
```

BOSTON PUBLIC SCHOOLS

DEPARTMENT OF EDUCATIONAL TESTING

CURRICULUM REFERENCED FINAL SPANISH II

1985 - 1986

C.1	Reading with sufficient comprehension to understand in printed form the simplest connected material dealing w/basic survival or social needs	1 - 5	READING
E.16	Use irregular affirmative informal commands correctly	6	
E.15	Use regular affirmative informal commands correctly	7	
E.17	Use negative informal commands and affirmative and negative formal commands correctly	8	
E.11	Use conjugated forms of reg. verbs in the present perfect tense	9	
I.5	Use the past participle as an adjective correctly	10	
E.24	Use the infinitive form of the verb after prepositions	11	
J.4	Use pero in positive statements & sino in negative statements	12	
K.2	Form negative constructions two ways (nadie me habla; no me habla nadie)	13	
K.2		14	
L.2	Use interrogative words correctly	15	
Level I G.9	Use the correct forms of demonstrative pronouns	16	
I.8	Use correct forms of demonstrative adjectives	17	
Level I L.2	Use interrogative words correctly	18	
Level I I.7	Use correct patterns w/tan...como to make comparisons of equality	19	
Level I L.2	Use interrogative words correctly	20	
Level I E.9	Use conjugated forms of reg. verbs in the conditional tense	21	
E.5	Use conjugated forms of reg. & irr. verbs in the imperfect tense	22	
E.21	Use subjunctive mood to express doubt, denial and unreality	23	
E.7	Use conjugated forms of reg. verbs in the future tense	24	
E.3	Use conjugated forms of spell/change verbs in the present tense	25	
G.10	Use the relative pronouns que and quien correctly	26	
G.10		27	
E.23	Use the passive voice correctly	28	
I.5	Use the past participle as an adjective correctly	29	
H.4	Omit articles w/unmodified nouns of nationality & occupation	30	
M.1	Recognize uninverted questions by intonation	31	GRAMMAR PART A
G.3	Use the correct forms of pronouns after a preposition	32	
Level I I.7	Use correct patterns w/tan...como to make comparisons of equality	33	
Level I H.8	Use other idiomatic expressions (acabar de, por lo menos)	34	
Level I G.10	Use the relative pronouns que and quien correctly	35	

E.3	Use conjugated forms of regular, irregular and stem-changing verbs correctly in the preterite tense	36 - 45	GRAMMAR PART C
E.8	Use conjugated forms of irregular verbs correctly in the future tense (decir, hacer, poder, querer, saber, poner, salir, tener, vernir)	46 - 55	VERBS
P.10	Report and answer requests for factual information	56	FUNCTIONAL OBJECTIVES
P.5	Report information chronologically related	57	
R.4	Inquire about interest or disinterest	58	
R.10	Inquire about satisfaction, dissatisfaction, or disappointment	59	
R.13	Express want, desire, or intention	60	
V,W	Cultural Knowledge and Cultural Attitudes	1 - 10	CULTURE

```
 379 SPANISH II          TECK5005              11/07/86
PERCENTAGE OF CORRECT ANSWERS PER ITEM
NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY **

SCHL    1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 TOTAL

 1040  41 52 35 29 47 17 76 52 11 58 52 23 70 70 70 58 47 47 58 70 23 58 17 29 35 41 47 47 47 88 76 76 76 52 70 50
 1110  41 70 83 51 58 67 80 83 80 90 87 64 93 96 83 87 54 80 80 80 67 58 64 90 87 45 51 87 77 87 90 96 74 54 87 75
 DISA  41 64 66 43 54 50 79 72 56 79 75 50 85 87 79 77 52 68 72 77 52 58 47 68 68 43 50 72 66 87 85 89 75 54 81 66

 1250  83 77 77 72 81 40 64 62 66 68 61 66 66 55 40 74 42 66 74 57 57 74 40 62 24 55 25 55 72 83 77 87 79 75 79 64
 1100  40 43 25 34 28 15 46 28 40 71 34 21 31 21 71 37 28 21 34 21 40 34 40 28 40 34 34 46 40 62 28 43 43 31 31 36
 DISB  67 65 58 58 61 31 58 50 56 69 51 50 53 43 52 60 37 50 59 44 51 59 40 50 30 47 29 52 60 75 59 70 66 59 61 54

 1360  42 64 21 28 57 35 64 57 14 57 21 14 42 28 50 35 42 64 35 14 28 21  7 28 42 42 14 42 42 85 71 64 57 21 50 40
 1120  75 63 58 44 66 47 66 38 52 77 47 50 61 47 63 55 36 50 61 50 27 50 47 33 63 52 41 58 66 75 61 61 58 33 41 53
 1160  23 41 29 29 11 88 70 35 29 23 35 17 29 35 64 52 35 35 35 47 11 23 35 35 47 11 17 64 64 88 88 82 88 47 23 42
 DISC  55 58 43 37 50 55 67 41 38 59 38 34 49 40 61 50 37 49 49 41 23 37 35 32 55 40 29 56 61 80 70 67 65 34 38 48

 1350  39 46 35 25 46 60 71 60 14 53 32 17 64 46 60 50 25 53 53 35 17 25 10 14 25 42 32 57 46 92 67 78 60 78 71 46
 1070  83 83 50 66 66 66 66 50 83 66 83 66 ** ** 83 83 50 83 66 ** 50 50 50 66  0 83 33 83 83 83 83 83 83 66 83 70
 DISD  47 52 38 32 50 61 70 58 26 55 41 26 70 55 64 55 29 58 55 47 23 29 17 23 20 50 32 61 52 91 70 79 64 76 73 50

 1080  43 46 27 37 62 45 51 40 29 56 51 27 56 45 54 56 45 56 51 48 32 45 27 40 29 29 29 54 67 75 54 75 64 62 70 48
 1210  82 58 60 38 62 40 74 42 36 66 58 28 66 64 44 60 42 64 56 64 26 24 54 24 52 52 22 48 60 90 76 82 48 74 62 54
 1240  33 72 33 22 50 44 83 55 27 72 77 27 38 33 44 94 50 55 61 66 27 33  0 44 16 38 44 66 44 66 77 44 88 66 77 50
 DISE  60 57 43 35 60 42 67 43 32 63 59 27 58 52 47 64 44 60 55 59 28 33 35 33 38 41 28 53 60 80 68 73 60 68 67 51

 DISA  41 64 66 43 54 50 79 72 56 79 75 50 85 87 79 77 52 68 72 77 52 58 47 68 68 43 50 72 66 87 85 89 75 54 81 66
 DISB  67 65 58 58 61 31 58 50 56 69 51 50 53 43 52 60 37 50 59 44 51 59 40 50 30 47 29 52 60 75 59 70 66 59 61 54
 DISC  55 58 43 37 50 55 67 41 38 59 38 34 49 40 61 50 37 49 49 41 23 37 35 32 55 40 29 56 61 80 70 67 65 34 38 48
 DISD  47 52 38 32 50 61 70 58 26 55 41 26 70 55 64 55 29 58 55 47 23 29 17 23 20 50 32 61 52 91 70 79 64 76 73 50
 DISE  60 57 43 35 60 42 67 43 32 63 59 27 58 52 47 64 44 60 55 59 28 33 35 33 38 41 28 53 60 80 68 73 60 68 67 51
 STOT  57 60 50 42 56 45 67 50 42 65 53 37 60 52 57 61 40 56 57 53 36 43 36 41 42 44 32 57 60 81 69 74 65 58 62 53
```

BOSTON PUBLIC SCHOOLS

DEPARTMENT OF EDUCATIONAL TESTING

CURRICULUM REFERENCED FINAL FRENCH I

1985 - 1986

I.5	Using correct forms of interrogative adjective quel	1	GRAMMAR
H.9	Using the partitive de in negative statements	2	
M.8	Use idiomatic expressions w/avoir, faire & locutions like a cote	3	
I.2	Correctly placing descriptive adjective after noun	4	
E.10	Using aller plus infinitive to describe actions occuring in future	5	
M.8	Using idiomatic expressions with avoir, faire, jouer a, jouer de,	6	
M.8	and locutions like a cote de & common prepositions & pts. compass	7	
G.8	Place object pronouns before an infinitive when conjugated verb is followed by an infinitive	8	
H.8	Use the correct form of partitive (du, de l', des, de la)	9	
I.7	Use correct forms of possessive adjectives	10	
E.6	Use conj. forms of reg. verbs correctly in the passe compose tense	11	
I.4	Use correct comparative forms of adjectives	12	
I.7	Use correct forms of possessive adjectives	13	
G.7	Place indirect object pronouns in position before conj. verb	14	
M.8	Use idiomatic expressions w/avoir & locutions like a cote	15	
G.11	Use forms of disjunctive pronouns alone, after prepositions	16	
I.6	Use correct forms of demonstrative adjectives	17	
J.2	Use adverbs of quantity with de and nouns	18	
I.1	Use forms of reg. adjectives to agree in no. & gender w/the noun	19	
I.5	Use correct forms of interrogative adjective quel	20	
E.5	Use commands correctly	21	
E.6	Use conjugated forms of reg. verbs in the passe compose tense	22	
G.12	Use y and en correctly and placing before verb	23	
J.1	Use & place adverbs correctly in a sentence	24	
E.7	Use conj. forms of common irregular verbs in passe compose tense	25	
H.10	Use de before plural adjectives that precede the noun	26	
G.10	In affirmative command, place obj. pronouns after verb w/hyphen	27	
M.8	Use idiomatic expressions with avoir, faire, jouer a, jouer de,	28	
M.8	locutions like a cote de & points of the compass	29	
G.12	Use y and en correctly and placing before verb	30	
G.5	Place direct obj. pronouns in position before conjugated verbs	31	
E.7	Use conj. forms of common irr. verbs in the passe compose tense	32	
H.3	Use the contractions au, aux, du, des correctly	33	
K.2	Use interrogative words correctly	34	
M.7	Use vocabulary from areas for example: human body, geography	35	
I.6	Use correct forms of demonstrative adjectives	36	
L.1	Form negative sentences by placing ne & pas around verb/present	37	
K.2	Use interrogative words correctly	38	
L.3	Use ne...jamais in the present, by placing around the verb	39	
M.7	Use vocabulary from areas for example: dishes & utensils	40	
C.1	Reading with sufficient understanding	41	READING
C.2	Reading with sufficient comprehension to interpret set	42	
C.2	expressions in areas of immediate need	43	
C.2		44	
C.2		45	
E.2	Using conjugated forms of common irregular verbs correctly in the present tense: etre, avoir, aller, faire, dire, pouvoir	1 - 10	IRREG. VERBS

R.3	Express interest or lack of interest	a	FUNCTIONAL OBJECTIVES
P.9	Report and answer requests for factual information	b	
P.7	Request objects or information	c	
Q.5	Express & inquire about permission to do something	d	
S.1b	Apologizing & granting forgiveness; accepting the apology	e	
V,W	Cultural Knowledge and Cultural Attitudes	1 - 10	CULTURE

```
 329 FRENCH I            TELP5005            11/07/86
PERCENTAGE OF CORRECT ANSWERS PER ITEM
NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY **

SCHL     1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40

 1340   54 54 40 32 21 51 18 16 35 40 21 18 56 43 24 29 13 24 27 48 29 27 16 43 45 21 35 40 24  2 24 21 45 51 48 59 59 18 64 53
 1110   72 68 84 60 44 68 76 40 60 44 52 60 56 52 63 53 48 23 40 72 24 56 20 36 32  8 52 32 24 40 40 24 60 60 80 48 76 28 44 64
 DISA   61 59 53 43 30 58 22 25 45 41 33 35 54 46 38 37 27 25 32 58 27 30 17 40 40 16 41 37 24 17 30 22 51 54 61 54 66 22 56 75

 1250   56 26 41 39 48 56 29 31 46 41 43 51 56 36 29 65 26 19 51 60 75 36 56 60 36 17 43 29 21 19 26 34 60 48 73 39 68 14 48 36
 1100   50 75 62 54 54 50 16 45 58 45 70 58 70 25 70 66 54 54 41 66 75 62  4 75 50  8 75 58 25  8 12 62 79 66 70 50 79 58 66 54
 DISB   53 44 49 44 50 53 24 36 50 43 53 53 58 32 44 66 36 32 47 63 75 46 36 66 41 13 55 40 23 15 21 44 67 55 72 43 72 30 55 43

 1360   80 40 80 40 80 40 40 80 40 60 60 40 40 60 60 80 20 40 20 60 80 20 40 60 40  0 80  0  0 20  0 60 60 60 60  0 ** 40 ** 20
 1120   84 23 23  7 53 61 23  7  7 30 23 23 15 30 23 23  7 15 30 38 15 23 15  7 46 53 53 23 30 30 23 15 53 23 53 61 53 38 53 15
 1160   90 62 78 68 65 71 53 68 59 59 68 62 66 59 62 43 78 46 56 62 50 46 46 65 65 37 68 43 43 62 43 43 65 62 75 68 81 40 75 46
 DISC   68 50 64 50 62 66 44 52 44 50 56 50 52 52 52 42 54 38 46 56 44 38 38 50 58 38 66 34 36 50 34 38 62 52 68 60 76 40 72 36

 1380   54 39 47 45 62 26 21 62 47 65 26 43 63 35 45 54 36 27 35 58 26 43 23 64 20 17 60 20 12 13 28 28 63 35 53 50 63 35 47 36
 1210   45 62 33 70 66 37 20 58 58 29 16 41 45 45 25 70 20 12 70 58 41 29  4 41 16 16 87 12 16  8 45 12 70 50 37 41 54 41 45 50
 DISE   61 45 44 51 41 28 21 39 50 41 23 43 58 38 40 58 32 23 44 58 29 40 18 58 19 17 67 18 13 12 32 24 64 39 49 48 60 37 47 40

 DISA   61 59 53 43 30 58 22 25 45 41 33 35 54 46 38 37 27 25 32 58 27 30 17 40 40 16 41 37 24 17 30 22 51 54 61 54 66 22 56 75
 DISB   53 44 49 44 50 53 24 36 50 43 53 53 58 32 44 66 36 32 47 63 75 46 36 66 41 13 55 40 23 15 21 44 67 55 72 43 72 30 55 43
 DISC   68 50 64 50 62 66 44 52 44 50 56 50 52 52 52 42 54 38 46 56 44 38 38 50 58 38 66 34 36 50 34 38 62 52 68 60 76 40 72 36
 DISD
 DISE   61 45 44 51 41 28 21 39 50 41 23 43 58 38 40 58 32 23 44 58 29 40 18 58 19 17 67 18 13 12 32 24 64 39 49 48 60 37 47 40
 STDT   64 49 52 47 44 48 26 37 48 43 39 45 56 41 43 52 36 28 42 59 42 39 26 54 36 20 58 30 22 21 29 31 62 48 60 50 67 32 55 48
 309 FRENCH I              TECASOUS              11/07/86
PERCENTAGE OF CORRECT ANSWERS PER ITEM
NOTE 100 PERCENT ON A PARTICULAR ITEM IS INDICATED BY **

SCHL    41 42 43 44 45 TOTAL

 1040   62 43 29  8 45 36
 1110   68 36 20  8 32 46
 DESA   64 40 25  8 40 40

 1250   75 78 78 58 56 45
 1100   83 79 45 50 54 54
 DESB   78 78 66 55 55 48

 1060   80 60 60 20 20 46
 1120   23 15 30 15 30 30
 1140   93 75 71 43 28 60
 DESC   74 58 60 34 28 51

 1200   36 12 30  9 20 37
 1210   66 41 50 12 25 41
 DESE   44 19 35 10 21 38

 DESA   64 40 25  8 40 40
 DESB   78 78 66 55 55 48
 DESC   74 58 60 34 28 51
 DESD
 DESE   44 19 35 10 21 38
 STOT   62 45 44 24 35 43
```